

# AMERICAN ARTISAN and Hardware Record

Vol. 81. No. 3.

620 SOUTH MICHIGAN AVENUE, CHICAGO, JANUARY 15, 1921.

\$2.00 Per Year.



JAN 17 1921

*"Just What You Want  
When You Want It"*

**T**HAT'S what dealers say when describing our service.

A good many years ago we started this big job on a small scale and today we receive the patronage of thousands of dealers because we have not only adopted but continually made good on our motto: "Everything Must Be Right".

Remember, we are manufacturers as well as merchants and we carry and sell—

## **EVERYTHING FOR THE TINSMITH**

*THE LARGEST AND MOST COMPLETE STOCK IN THE STATES*

HANDLES, CONDUCTOR HOOKS, EARS, GUTTER HANGERS, VALVES AND PLUNGERS, CONDUCTOR PIPE, EAVE TROUGH, FIRE POTS, ROOFING SUPPLIES, SHEET METAL TOOLS, VENTILATORS AND SHEET METALS OF ALL KINDS.

Our latest cata'og lists practically every article in your line and contains much general information which you should have on hand. Write today for a copy of this large catalog, send us your next order and become one of our host of satisfied customers.

*Is there something you need now?  
Let us give you our prices.*

## **BERGER BROS. CO.**

229-231-233-235-237 ARCH STREET

WAREHOUSES AND FACTORY; 100 TO 114 BREAD STREET

PHILADELPHIA, PENNSYLVANIA

## A REPUTATION BUILT ON QUALITY

Clark Jewel Oil Stoves are famous because they are good looking and good working stoves.

They are constructed of the best material—made by workmen long experienced in the manufacturing of stoves of high quality.

The High Speed burners on Clark Jewel oil stoves give an even, clean heat with low fuel consumption.

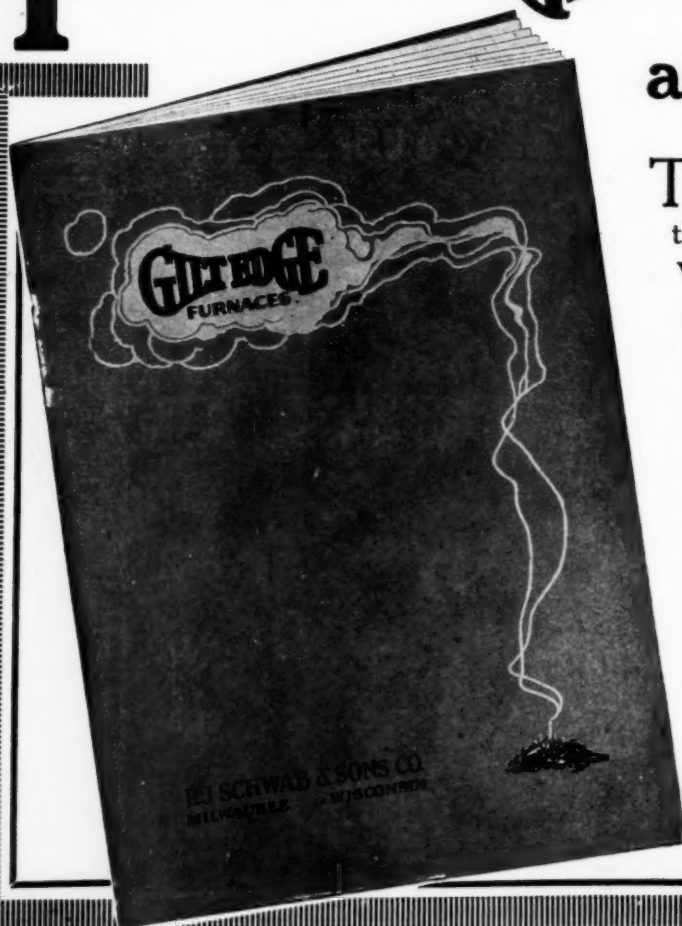
Clark Jewel Oil Stoves are high quality stoves throughout. We are prepared to demonstrate this beyond question.

*Write for your copy of No. 112 Catalog today  
Just off the press*

**GEORGE M. CLARK & COMPANY**  
Division American Stove Company  
CHICAGO



## The New GILTEDGE Catalog and Selling Aids



THIS catalog in addition to detailed description of many points of advantages of the GILT-EDGE Furnaces, contains some valuable data on furnace installation.

It shows by means of text and diagrammed illustrations the proper construction of chimney flues, and the proper method of installing hot air pipes and cold air returns. This information should be in the hands of every heating contractor.

SELLING AIDS consisting of broadsides for direct mailing, folders for envelope enclosures and electros for newspaper advertising will be furnished to all Gilt-Edge dealers.

*Send today for full details.*

**R.J. Schwab & Sons Co.**

285 Clinton Street, Milwaukee, Wis.



FOUNDED 1880  
BY  
DANIEL STERN  
Thoroughly Covers  
The Hardware, Stove,  
Sheet Metal, and Warm  
Air Heating and Venti-  
lating Interests

# AMERICAN ARTISAN and Hardware Record

Address all communications and  
remittances to  
AMERICAN ARTISAN  
AND  
HARDWARE RECORD  
620 South Michigan Avenue  
Chicago, Illinois

PUBLISHED EVERY SATURDAY BY ESTATE OF DANIEL STERN

TERMS OF SUBSCRIPTION IN THE UNITED STATES AND ITS POSSESSIONS (Invariably in Advance) ONE YEAR POSTAGE PAID \$2.00  
FOREIGN COUNTRIES ONE YEAR POSTAGE PAID \$4.00 CANADA ONE YEAR POSTAGE PAID \$3.00

Entered as Second-Class Matter June 25 1885 at the Post Office at Chicago, Illinois under Act of March 3rd 1879

Vol. 81. No. 3.

CHICAGO, JANUARY 15, 1921.

\$2.00 Per Year.

Encouraging signs of improvement in the business situation are increasing. Mind is

## Right Views of Business

beginning to triumph over nerves. Judgment is resuming the place usurped by fear and worry. According to the sensible review of business by the Irving National Bank, New York, merchants are wisely reducing inventories. The purchasing public has developed a disposition to measure values more carefully than even a few months ago. Banks are advising customers against extensions involving any element of the speculative. Factories are producing with greater reference to demand in sight. Exporters, instead of attempting to force sales in foreign fields not in a position to buy, are taking advantage of the lull in activity to improve their internal organizations the better to take care of future demands.

These indications of improvement, are extremely important, not because they mark anything like the end of our difficulties, but because they do mark a change in the temper of our people. A change of this sort must take place before we will arrive at anything substantial in reconstruction.

With a normal mental condition upon the part of Americans generally, there is but little we need fear. Without it, expedients looking towards improvements are nearly sure to produce results which will not remain.

♦ ♦ ♦ ♦ ♦

At a recent meeting with the employers of the National Cash Register Company,

## What Honest Dissatisfaction With His Job Did for John.

John H. Patterson, the veteran President of the Company, who is now taking a well earned rest in Europe, made the following statement in an address incidental to the presentation of prizes to the winners

in the Company's annual Suggestion Contest:

"Some years ago, in conversation with a preacher, I was asked this question: 'What is your greatest trouble?' My reply was that my greatest trouble was in getting employees at the factory to co-operate with me in improving conditions. The preacher countered with this suggestion: 'You have 3,000 employees, with 6,000 eyes and 6,000 ears and 3,000 brains; they see more, hear more and think more—many times more than you can possibly do—ask them to help you, and make it worth their while!'

"I followed his advice, and as a result, these great annual Suggestion Contests have been so successful that we have received over 66,000 suggestions in eight years of which 23,000 were adopted, and in 1920 eleven hundred and seventy-eight persons received altogether \$7,995.00 in prizes."

Mr. Patterson was dissatisfied with his job eight years ago. He was under the impression that he could not induce his employees to co-operate in the proper manner with him, that they did not take sufficient interest in the business to think about "after hours", or even during business or work hours, so far as studying out means by which improvements might be made.

He was honest about it, and, somehow, he could not stop thinking about this trouble.

From an entire outsider, a man who was not supposed to know anything about business, came the suggestion that overcame the trouble.

There is probably not a manufacturer of hardware, nor a wholesaler of hardware, nor a retailer of hardware, nor any other employer of men in a commercial, industrial or financial enterprise, who has not of some time thought the same way as Mr. Patterson.

And yet, the remedy is so close by that it is

a wonder so few people have recognized that it lies within themselves.

Make it an object for your employes to think about your business "after hours", and while at work; either by some plan like the Suggestion Contest mentioned in the foregoing, or by direct payment for any suggestion for improvement which is adopted, as is done by Marshall Field & Company, and other successful merchants.

You may be inclined to blame your employes for lack of interest in the progress of your enterprise, but do you really take much interest in their progress, except to the extent of a more or less heated correction and verbal castigation when they have done something you do not consider proper?

Mr. Patterson made a lot of his employes honestly dissatisfied with their jobs, with the result that his business was greatly improved, in the matter of profits as well as in the matter of better relations between the management and the employes—which latter is fully as important as the former. Wouldn't it be worth your while to make John honestly dissatisfied with his job?

♦ ♦ ♦ ♦ ♦

Put yourself into your advertisements. Personality counts most, even in big business. It is vital in retail mer-

**Personality** chandising where customers  
**In Publicity** come into direct relation with  
the merchant. Marshall

Field in Chicago and John Wanamaker in Philadelphia are examples of success built upon personality.

An impersonal advertisement is too much like a railroad time-table. It does not create good will for the advertiser. There is no friendliness in it. The customers who keep on coming to your store, are the people who like you. If they didn't like you, they would not come often.

♦ ♦ ♦ ♦ ♦

Whoever it was that first formed the expression, "It Can't Be Done," has a great deal to answer for. He is responsible for many of the failures of men to live up to their opportunities.

**It Can't  
Be Done**

Sometimes his followers will qualify the statement with some such clause as, "under existing conditions," "unless this-or-that thing happens," "because of this-or-that"—

anything to give plausibility to their opinion.

As a matter of fact, there are very few things that cannot be done if we only set our minds to do them. It may not be good policy to do them, it may result in harm to ourselves and others if we do the thing. But in most cases, we can do most of the things which we are endeavoring to sidestep when we use the expression referred to.

For example, there is many a wholesaler and many a retailer of hardware who today is preparing for poor business this year. He is taking the attitude that "It can't be done," when he refuses to place orders for a reasonable supply of goods. He is following it up when he cuts down his advertising. He is making a decided attempt to prove that his opinion is right when he lets down in his efforts to secure new business.

The weak sister, the person without backbone, never did and never will, be a useful member of society. It has always been, and always will be, the men who are willing to make a real, personal, effort that have been the cause of every bit of progress that we gain and of every year of profitable business that we enjoy.

The year of 1921 will be a prosperous year for the hardware dealer who is now perfecting his plans for an aggressive selling campaign.

♦ ♦ ♦ ♦ ♦

Retail merchants are bound to be affected by the zoning system which has been adopted or is proposed for adoption

**Meaning of** by many cities. It is well,  
**Zone System** therefore, to understand  
what is meant by city zon-

ing. Briefly described, it signifies the division of the area of the city into different districts or zones. These zones are to be used for different purposes and for different kinds of buildings.

A zone is any portion of a city. It may comprise any area from a block to many acres. Zones are divided into three kinds, namely, industrial, which includes light and heavy manufacturing; commercial, embracing stores and business buildings; and residential districts intended only for homes.

As concerns the retailer, a zone plan, properly worked out, secures the placing of stores along business streets and among other stores.



## Random Notes and Sketches

By Sidney Arnold

George Beaudien, who sell Wiss shears for sheet metal workers and manicure and embroidery scissors for the young ladies—the only complete line of “paired” cutlery, if you please, according to George—was already to go to a party with his better half, when his private chauffeur informed him that all the cars were out of order. He called the “green and gold” taxi office but no conveyance which was deemed proper for the occasion could be secured, so Mrs. B. told him that they would walk, as they were only a few blocks from their point of destination.

George was all dolled up, in open front coat and varnished boots, with a silk hat to match.

Just as they turned the corner, he saw a flock of youngsters who were engaged industriously in forming little round balls of nice white snow.

Nothing daunted, however, George kept on until they were about twenty feet past the boys, when suddenly he clapped his hands to the top of his hat, pressed downward—and kept moving.

The poor youngsters had nothing to shoot at, for the hat was one of the collapsible kind that you carry under your arm when you take it off.

\* \* \*

There is no accounting for tastes—judging by the number of people whose long suit is self-admiration.

\* \* \*

Yes, the world owes you a living, but you will starve to death if you sit down and wait for it to come round and settle.

\* \* \*

Charlie Scarborough who is one of the prominent hardware men of Pittsburgh, Pennsylvania, being a member of the Scarborough, Klauss Company, believes thoroughly in rendering service to his customers, and will not only go to unusual length to satisfy a customer's desires, but simply will not stand for any of his sales people telling a prospective purchaser that “we haven't this in stock,” or that “we cannot get this for you.”

The following amusing incident for which “Charlie” vouches as an absolutely true story, happened a short time ago in his store:

A customer had just complimented him upon the courtesy and accommodating spirit which is so noticeable among his employes, but, said she, “I am quite sure that you won't be able to get one thing for me which I desire very much.

“Charlie” asked what the thing might be, and the lady told him that she had just lost a pet cat, and that she wanted very much to get another—a black one if possible.

Nothing daunted, “Charlie” told her to wait a day or so, when the cat would be delivered—and it was. He had one of his “boys” watch a fence behind his store that same evening, and within a short time his quarry come jumping across the yard for his nightly interview with other felines. The boy slipped up behind Mr. Tom and promptly took him to a safe place from which he was delivered the next morning to the customer.

A washerwoman applied for help of a gentleman, who gave her a note to the manager of a certain club. It read as follows: “Dear Mr. X.:—This woman wants washing.”

Soon afterwards the answer came back: “Dear Sir:—I dare say she does, but I don't fancy the job.”

\* \* \*

A certain prominent lawyer of Minneapolis is in the habit of lecturing his office staff from the junior partner down, and Tommy, the office boy, comes in for his full share of the admonition.

That his words were appreciated was made evident to the lawyer by a conversation between Tommy and another office boy on the same floor which he recently overheard.

“Watcher wages?” asked the other boy.

“Ten thousand a year,” replied Tommy.

“Aw, g'wan!”

“Sure,” insisted Tommy, unabashed. “Four dollars a week in cash an' de rest in legal advice.”

\* \* \*

“It seems to me I have already heard some of the stories told by this monologist.”

“Perhaps you have.”

“Yes?”

“He's a retired bartender who has gone into vaudeville.”

\* \* \*

An editor started poor as a proverbial church mouse twenty years ago. He has now retired with a comfortable fortune of \$50,000.00.

This money was acquired through industry, economy, conscientious effort to give full value, indomitable perseverance, and the death of an uncle, who left the editor \$49,999.50.

\* \* \*

Keeping up a steady average of performance is better for you and better for your work than achieving a brilliant success now and then and spending the rest of your time in reviewing it.

The great tasks of the world are done by those who do their best day in and day out.

There is not much applause to be had from this procedure nor does one occupy the limelight continuously while “making good.” However, the sum total of steady efforts is bigger and more satisfying.

Strickland W. Gillian puts these thoughts into pleasant verse as follows:

### Making Good.

My boy, you think that all you have to do is “make a hit,”  
To catch the public eye and ear, then evermore be “it,”  
You think one stroke sufficient for one lifetime—maybe two,  
That, once a man is famous, there is nothing left to do.  
I hate to wake you, sonny, from your iridescent dream,  
And keep your skiff from drifting any farther down the stream;  
But here's what I've discovered: He who's done the best he could  
Is merely obligated just to keep on making good.

This world was not constructed for the lazy man of dreams;  
One flash is not a nugget—gold is constant with its gleams.  
The world keeps looking higher than the level you've attained,  
And thinks you retrograding till it's certain you have gained.  
No standstill will it tolerate; slide back, and you will see  
Your name among the “has-beens” as a harmless “used-to-be!”  
The standard you established when you did the best you could  
Was but your affidavit that you'd keep on making good.

# Up-to-the-Minute News Siftings

*Items of Interest to Dealers Gleaned from Many Fields.  
National and Local Business Plans, Problems, and Practices.*

## **START PUBLICITY CAMPAIGN TO BRING BACK PROSPERITY.**

A nation-wide publicity campaign, along the line of those pushed during the war, aimed to shatter the pessimism that prevails in buying channels and to lay the basis for a return of prosperity by a "buy-now" crusade, has been decided on as the result of a series of conferences held last week in New York by manufacturers of national reputation representing a business investment of upward of \$30,000,000.

Announcement to this effect was made late the past week by Arthur Freeman, general director of the Affiliated Stores, which includes some of the largest department stores in the United States.

The conferences were held in the New York offices of the company in the Hobart Building.

It was generally emphasized at all these meetings that the public not only has not abandoned its so-called "buying strike," but that the indifference of buyers is the cause of closed factories and men without jobs.

To head-off the threatened advent of soup kitchens and bread lines, these interests decided to undertake at once a great nation wide campaign to prove to people that idleness and disorder, which always go together, will increase if the public fails to keep the dollar circulating, even at the bottom prices now prevailing.

"Buy Now and Put the Men Back to Work" and "Your Purchase Keeps America Employed" are slogans adopted for the campaign. National headquarters were taken in the Masonic Building on West 23rd Street, New York City, and the drive set in motion under the auspices of the National Prosperity Bureau.

The promoters of the campaign are convinced that the active cooperation of all forward looking commercial and civic bodies of the nation united in a common endeavor to instill optimism at this time quickly will dispel the clouds of depression which hang over the entire country.

They point to the efficacy of the poster in quickly delivering the message of the war drives. They assert that merchandise of every sort in the stores must be sold to make room for other goods which, in turn, must come from the mills when the men are re-employed.

Many have gone so far as to assert that it is the "part of patriotism and the duty of a good citizen, with the army of the unemployed a constantly increasing menace to peace and prosperity, to buy what he needs at present, for these purchases are what keeps America employed."

They point out that it was not until the moment when the public stopped buying that unemployment started in, and insist that there is no way to open the closed mills and factories except to convince the public that

the bottom in prices actually has been reached and that the time to buy for the year, if possible, is right at this moment.

"It is our plan to weld all the great industries of the United States into a solid prosperity chain, stretching the length and breadth of the United States," declared Mr. Freeman.

"We will utilize every form of publicity available, we will picture prosperity and its enemy adversity so strongly in the public minds of the people all over the country that none will hesitate to make the choice in favor of Prosperity, and that an immediate one.

"A vast amount of advertising in newspapers, magazines and periodicals will be used to promote celebrations of prosperity in every town and city in the country."

## **National Thrift Week Is of Importance to All.**

The purpose of the National Thrift Week, January 17 to 23, 1921, is clearly expressed in the slogan adopted by the National Thrift Week Committee, namely: "Make your money mean more."

Irrespective of creed or industry or conflicting interests, every one in the United States can be benefited by taking part in this national campaign.

Thrift does not mean hoarding. It does not signify withdrawal of wealth from the active resources of the country. It is designed to put an end to waste of values and every form of squandering.

The National Thrift Week has received the endorsement of practically every organization in America.

The lessons which it teaches are summed up in the ten point financial creed as follows:

1. Work and Earn.
2. Make a Budget.
3. Record Expenditures.
4. Have a Bank Account.
5. Carry Life Insurance.
6. Own Your Own Home.
7. Make a Will.
8. Pay Your Bills promptly.
9. Invest in Reliable Securities.
10. Share with Others.

The spirit of the National Thrift Week campaign is well expressed by R. G. Chomeley-Jones, Director of War Risk Insurance, United States Treasury Department, Washington, D. C., who says:

"I believe National Thrift Week is an enterprise which should be fostered and which should become as much a part of the annual program of every group of citizens of the nation for the promotion of their economic stability as is the observance of our national holidays which are designed to promote our patriotic devotion to our country."



# The Week's Hardware Record

*What Retailers, Jobbers, and Manufacturers Are Doing.  
Latest Selling Methods. Experiences of Successful Men.*

## WHAT DID YOU MAKE IN 1920?

Work has begun on the collection of the income tax for the year 1920. Uncle Sam, through the Bureau of Internal Revenue, is addressing to every person in the United States the question, "What was your net income for 1920?"

The answer permits of no guesswork. Every single person whose net income for 1920 was \$1,000 or more and every married person whose net income was \$2,000 or more is required to file a return under oath with the collector of internal revenue for the district in which he lives on or before March 15, 1921.

The penalty for failure is a fine of not more than \$1,000 and an additional assessment of 25 per cent of the amount of tax due.

For willful refusal to make a return the penalty is a fine of not more than \$10,000 or not exceeding one year's imprisonment, or both together with the costs of prosecution.

A similar penalty is provided for making a false or fraudulent return, together with an additional assessment of 50 per cent of the amount of tax evaded.

### Women Must Pay Tax.

The income tax applies to women as well as men. Husband and wife must consider the income of both plus that of minor dependent children, and if the total equals or exceeds \$2,000 a return must be filed.

A minor who has a net income in his own right of \$1,000 or more must file a separate return.

To be allowed the \$2,000 exemption a married person must be living with husband or wife on the last day of the taxable year, December 31, 1920.

Divorcees, persons separated by mutual agreement, widows and widowers, unless they are the sole support of others living in the same household, in which case they are allowed to \$2,000 exemption granted the head of a family, are entitled only to \$1,000 exemption.

### Tax Rates for 1920.

The normal tax rate for 1920 is the same as for 1919—4 per cent on the first \$4,000 of net income above the exemption and 8 per cent on the remaining net income.

This applies to every citizen and resident of the United States. In addition to the normal tax a surtax is imposed upon net income in excess of \$5,000.

### Instructions on Form.

Full instructions for making out returns are contained on the forms, copies of which may be obtained from collectors of internal revenue.

Persons whose net income for 1920 was \$5,000 or less should use Form 1040A. Those with incomes in excess of \$5,000 should use Form 1040.

Revenue officers will visit every county in the United States to assist taxpayers in making out their returns. The date of their arrival and the location of their offices will be announced by the press or may be ascer-

tained upon inquiry at the offices of collectors. This advisory service is without cost to taxpayers.

## Praises Bright, Instructive Pages of AMERICAN ARTISAN.

TO AMERICAN ARTISAN AND HARDWARE RECORD:

I derive considerable benefit from your paper, and you will hear from me often.

Allow me to add that I do not find anything in your paper which has a bearing on millwright trade.

But I find much valuable information, and the bright, lively, congenial articles appeal to my mind exactly.

Yours sincerely,

J. C. GRAHAM,

Millwright.

Grandville, Michigan, January 5, 1921.

## Incorporates Hardware Firm.

With a capital stock of \$60,000, the Cable Hardware Company, Nelsonville, Ohio, has been incorporated by E. J. Cable, L. C. Cable, F. W. Moore, C. A. Moore, and S. E. Dean.

## Is a Mighty Good Booster for AMERICAN ARTISAN.

TO AMERICAN ARTISAN AND HARDWARE RECORD:

I am a mighty good booster for AMERICAN ARTISAN and have taken it for the last twelve years. I would rather miss my Monday noon lunch than miss my weekly copy of your journal.

Yours truly,

HARRY HOPPER.

Ottawa, Illinois, January 11, 1921.

## Window Display Requires Study.

The study of lighting, of color combinations, and of backgrounds is worthy of the highest intelligence and the Display Manager of a metropolitan store is now one of its most important functionaries. It is his responsibility to present the desired picture through his windows, to supplement and emphasize the store's other publicity, and to pick his share of customers from the passing thousands by sheer skill and knowledge of his business.

**Your attention is directed to an exclusive feature of AMERICAN ARTISAN AND HARDWARE RECORD. It has the distinction of being the only publication which gives Western hardware and metal prices corrected weekly. You will find these prices on pages 36 to 41 inclusive.**

# Good Ideas for Window Display

*Practical Lessons from Exhibits in AMERICAN ARTISAN  
AND HARDWARE RECORD Window Display Competition.  
How to Get More Passers-By to Come into Your Store.*

## **MAKES STRONG WINDOW EXHIBIT OF CARPENTERS' TOOLS.**

The carpenter who could pass by the window exhibit shown in the accompanying illustration without pausing to study its attractive collection of tools would be in a tremendously big hurry or deaf, dumb, and blind.

This uncommonly clever window display was designed and arranged by George C. Franklin for the Smith Hardware Company, 175 West First Street, Oswego, New York.

It will be noted that the panels forming the back-

groupings around chalk line spools in the first row.

In the second row tool kits, saw sets, scratch awls, spoke shaves and kindred tools were distributed.

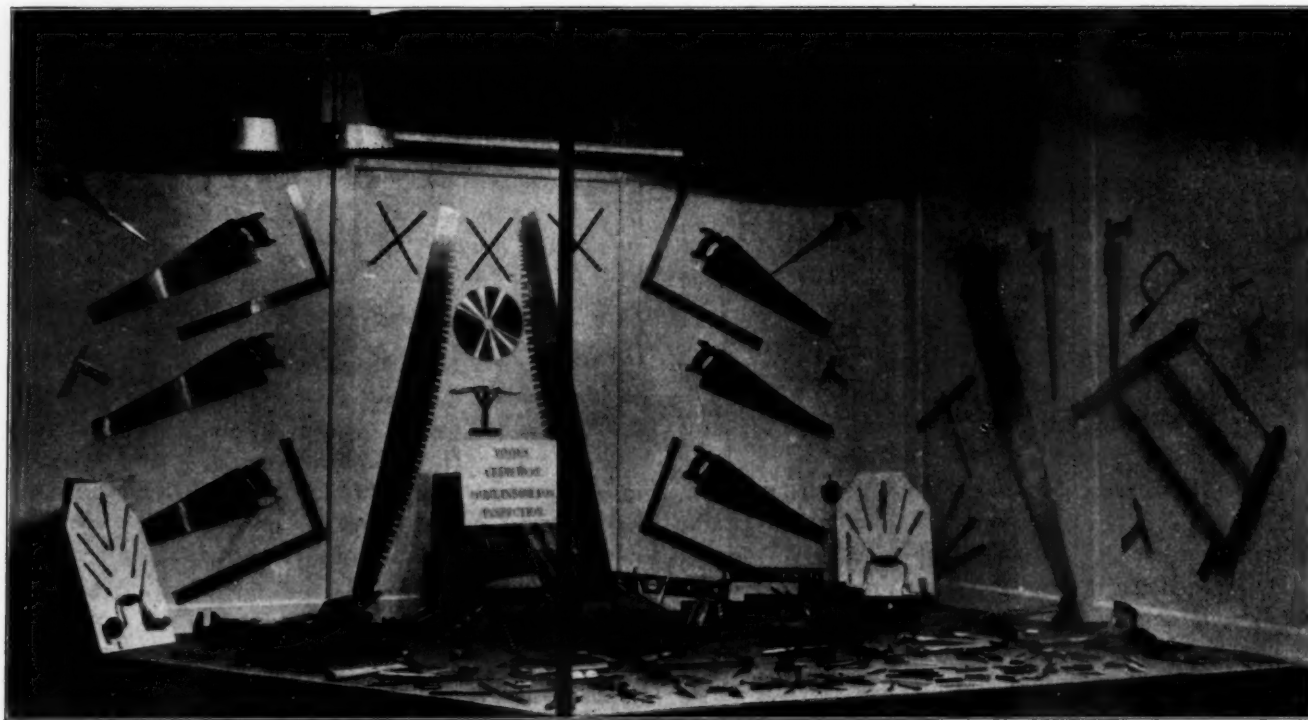
Hammers and hatchets were placed in half circles in the third row.

Just back of these to the sides of a slightly elevated platform were levels of various kinds, planes, machine augers, ratchet screw drivers, saw clamps, wrenches, floor scrapers, and trowels.

On the platform was a fine box set of chisels.

The easels in the corners contained bits and bit drills and one bit stock each.

Saws of various kinds made up the background,



Window Display of Carpenters' Tools Arranged by George C. Franklin, for Smith Hardware Company, 175 West First Street, Oswego, New York, Awarded Honorable Mention in AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition.

ground of this exhibit are not loaded down with tools. There is a liberal allowance of empty space to give a striking contrast and, therefore, accentuate the impression upon the eye of the observer.

Simple as the arrangement appears, the designer contrived to include in the display practically every tool used by carpenters.

According to his description of this window display, the background is of white panels and the floor is covered with light green oatmeal paper.

The tools are so placed that each one receives distinctive treatment and they are separated from the other particles so that they are easily perceived by the passerby.

Small tools such as nail sets, reamers, cabinet scrapers, mercury plumb bobs were placed in circular

and were so arranged as to give the effect of great variety.

The purpose of this window display was to show the comprehensive assortment of carpenters' tools carried by the Smith Hardware Company.

With the exception of the saws and some small tools, no two tools of the same kind were shown in the window.

It is of much advantage to a hardware store to produce the impression among its customers that the store carries a complete stock of standardized commodities in the hardware line.

The window display arranged by Mr. Franklin contributed to the producing and spreading of that desirable impression with reference, at least, to carpenters' tools.



The practical proofs of its effectiveness were to be found in the ledgers of the Smith Hardware Company in the form of increased sales on carpenters' tools.

### **Window Display Competition Is Nearing Its Close.**

Probably more sulphur has been injected into the atmosphere as a consequence of ladies waiting until the last moment to dress for the theatre or party than from any other cause, not excluding bunions and sore thumbs.

In the case of the gentler portion of the race, there is always ample justification for delay.

The extra ten minutes spent upon the coiffure or the entrancing angle at which the hat is placed are usually more than excusable because they enhance the charms of the lady who has kept the impatient husband or lover waiting.

But, as regards the window display competition of AMERICAN ARTISAN AND HARDWARE RECORD there is no leeway of extra time, no postponing of the closing date.

Even if a most wonderful of all window displays were to be evolved after the closing date of this contest, it could not be entered in the competition nor entitle its designer to any of the prizes.

The more thought that is given to the preparation of the window display for this competition the bigger is the likelihood of that window display taking the first prize.

Therefore, it is urged upon those who have not yet entered a display in the competition to begin at once to plan and arrange the best window display they know how to devise.

Only four weeks remain to the end of the competition.

We do not wish to convey the impression, however, that it is too late to enter the contest.

You can accomplish marvels in a month's time by concentrated study and effort.

That is why we urge you to begin at once and make the very best window display of your whole career.

Remember that the judges will not know whose window display it is, because according to the rules of the contest the real name of the designer is withheld from the judges and the photographs of the displays are estimated solely on their actual selling value.

#### **Award of Prizes.**

The prizes will be awarded as follows:

First prize, \$50.00 in cash, for the best photograph and description received of window display of hardware or kindred lines;

Second prize, \$25.00 in cash, for the photograph and description second in merit;

Third prize, \$15.00 in cash, for the photograph and description third in order of excellence;

Fourth prize, \$10.00 in cash, for the photograph and description fourth in degree of worthiness.

#### **Conditions of Competition.**

The conditions of the competition are as follows:

The photograph must be accompanied by descriptions of how the window displays were arranged and the materials used. The description is important and

hence should be adequate. These photographs and descriptions may be sent by mail or express, charges prepaid, and must reach this office not later than February 15, 1921. Address all photographs and descriptions to AMERICAN ARTISAN AND HARDWARE RECORD Window Display Competition, 620 South Michigan Avenue, Chicago, Illinois.

Each photograph and description must be signed by a fictitious name or device and the same name or device must be put in a sealed envelope containing the real name and address of the contestant. This sealed envelope is to be enclosed with the photograph. Contestants are permitted to enter as many photographs of displays as they please.

A Competition Committee of three will be appointed. One of them will be an expert window dresser and one an experienced hardware man. This Committee will pass upon the merits of all photographs and descriptions received, without knowing the names or addresses of the senders, and will decide the winners of the Competition.

AMERICAN ARTISAN AND HARDWARE RECORD reserves the right to publish all photographs and descriptions submitted.

### **Government Makes Explorations for Asbestos.**

The United States now obtains most of its high-grade, long-fiber asbestos from Canada, but geologists of the United States Geological Survey hope that large deposits which will yield material of good quality may yet be found in the western states, especially in Arizona, where asbestos of unusually long fiber and silky texture has been discovered.

In the Apache and San Carlos Indian reservations, in Arizona, asbestos is found associated with rocks known by geologists as the Apache group, which is made up of several formations.

The principal deposits are in the Salt River region, where the Apache group is represented chiefly by beds of quartzite and limestone, which are at many places invaded by diabase, an igneous rock.

Throughout this area much diabase has been injected into beds of limestone, and the asbestos is found near the contact of the limestone with the diabase.

Places where the limestone has been much broken by the diabase have been particularly favorable for the formation of asbestos.

The asbestos is invariably associated with serpentine, a greenish mineral that is in some deposits in other regions mottled like a serpent's skin, and although serpentine occurs at many places without asbestos, serpentine "float" fragments of it that lie loose on the surface, having been washed out from its outcrop, are a valuable aid to the prospector for asbestos.

In this region asbestos itself is also generally found as float for a considerable distance below its outcrop.

### **Increases Capital Stock.**

For the purpose of affording means to take care of expanding business, the Victoria Hardware Company, Victoria, Texas, has increased its capital stock from \$30,000 to \$80,000.

## How Pickering's Took Bath Room Fixture Business Away from the Department Stores in Cincinnati.

*In the Queen City the Department Stores Had at One Time the Bulk of This Business, but Pickering's Have It Now.*

In Chicago and many other large cities, a considerable share of the hardware business is done by the department stores—much larger than it ought to be, both from the standpoint of service rendered to the consumer and from the actual value delivered.

For it is a well known fact that the so-called sales people that hand out hardware in the average department store have little or no knowledge of the articles they handle, and it has also been proven true that, item for item, the regular hardware dealer's selling prices are lower than those of the average department store.

What then is it that causes Mrs. Smith or John Williams to go to the department store down town for an ash can, a saw, a set of bathroom fixtures, a roaster, a kitchen range, or whatever else may be wanted, instead of patronizing the hardware store in their neighborhood?

The Pickering Hardware Company, at the foot of Fountain Square in Cincinnati, Ohio, studied this matter out several years ago, and came to the conclusion that the fault or the blame for this condition was not with the consumer, but with the hardware dealer himself, and since then they have gone ahead with a policy which has made "Pickering's" a household word in Cincinnati, whenever Hardware is considered.

One of the lines on which the department stores in that city appeared to have considerably of a monopoly on the business was bathroom fixtures—towel racks, toilet paper holders, tooth brush and glass holders, shelf brackets, and all the other kindred items that are usually classed under that head.

Pickering's decided that this condition ought to be changed, and so they gave careful consideration to what they could do to induce people to come to their store instead of going to the department stores, or at any rate, come to their store before they eventually bought.

"We knew," said Ben Smith, Secretary of the Pickering Hardware Company, "that our values were as good or better than those offered by any concern in

Cincinnati, but the problem before us was to make Mrs. Jones feel that way about it, too, and we could see no other way than to advertise in the newspapers.

"This we finally decided to do, and it can be stated that a big share of our success is due to the fact that for years we have been consistent users of advertising space in the newspapers of Cincinnati.

"But it wasn't just advertising that did it, for we possess something in our organization that the average department store, with its cheaply paid employees,

can not have and does not possess. With that I mean, that our sales people are thoroughly trained, each one in some particular branch of the business, so that we have a corps of sales people who really "know" and who therefore are in position to give the prospective purchaser such information as he ought to have about the particular article that he has in mind to buy.

"Take the matter of towel racks, for example. There are all sorts of racks on the market, and to the average person there may be very little difference in actual value between one that is offered at \$1.00 and another the price of which is \$1.50.

All the information that he will usually get out of the department store employe is that the \$1.50 rack is better quality than the \$1.00 grade. In our store, the difference is explained in detail to him, with the result that in the majority of cases he buys the better rack.

"With this factor in our favor we went after this line of business, and as our selling prices compared very favorably with those of the department stores, there was soon a very marked improvement in our sales of bathroom fixtures.

"I want to say in this connection that any retail hardware dealer who is really on the job; who knows values; who spends his time in planning and executing the important features of his plans; instead of looking after the smaller details, such as bookkeeping, sweeping the floors, dusting the stock, etc., can always compete on a price basis with any department store or

**OUR customers—in fact, most of the people in Cincinnati—know that Pickering's sells something besides Hardware, and that something we are in the habit of calling "Service."**

**Service is the real basis of our success—just as it must be the foundation for the success of any business.**

**If a hardware man has the idea that all he has to do to build a profitable business for himself is to buy a stock and arrange it in a store room, so that people may come in and buy, he is making the greatest mistake of his life, and he is bound to lose out.**

**We believe in the obligation of Service to our customers. Our salesmen and saleswomen are carefully instructed in the lines they are to sell, so that they can give the prospective buyer the information he should have in order to insure satisfaction, for when a customer knows what he is buying he is certain to become a satisfied customer.**



mail order house.

"We made a strong feature of the matter of superior service on the part of our sales people—the useful and important information that our salesmen were in position to give to prospective purchasers of bathroom fixtures—of course, without in any way re-

portion of southern Ohio and northern Kentucky. We emphasize in every piece of advertising material that we publish, the fact that we are offering something besides just good value—that we are selling 'Hardware Service.'

"Many of our customers in outlying territory go on that basis in sending us orders. They tell us to send them the article which in our judgment will serve their purpose to the best advantage, and the price is very often never mentioned in their order.

"When an out-of-town customer comes in he is usually taken care of by one of our best men—or women, for we employ women as sales people in some of our departments—and the two go over the list, our salesman pointing out why such and such a lock or tool or kitchen utensil will serve better than some other, and usually his advice is followed.

"Such a course on the part of the customer implies that he must have confidence, not only in the house with which he deals, but, also, and more particularly, in the salesman who is waiting on him, and that sort of confidence can only be established by absolutely honest relations with the customer. It won't do to try to get the best of him in any way or to attempt to 'put something over on him,' for he is bound to find it out sooner or later, and that is why we take such care in selecting our sales force and in training the individual sales people.

"You will note," continued Mr. Smith, "that much more than half of our customers are women. The only items that a man comes to a hardware store, speaking by the rule, of course, is for a chisel or a saw or a ratchet brace or some other special tool. By far the the greater number of purchases of general hardware are made by women—which is an important point for the retail hardware man to remember in the arrangement of his stock and in the management of his store.

"In many cases women are kept away from the retail hardware store because of its untidy appearance and the unpleasant odors from stale tobacco smoke, etc., and are almost forced to patronize the department or general store.

"We make things as pleasant as possible for women customers. Saleswomen are employed in our store in many of our departments, because in these departments there are items which a woman simply will not buy from a man, but we find also that these saleswomen make good on general lines.

"So far as price competition is concerned, we are always ready to meet our competitor more than half way.

"For example, about four months ago, a certain safety razor was being extensively advertised by the manufacturer, and a drug store chain which operates about a dozen stores in the downtown section thought it a good time to cash in on this general publicity, so they advertised a big sale on the razors at \$3.89 and a package of blades at 89 cents. We could see no reason why a drug store should have any special advantage, so we placed an advertisement in all the Cincinnati papers offering the same razor at \$3.69 and the blades at 69 cents.

"The result of the sale was that we sold every razor

Anything  
in  
Hardware

## PICKERING'S

POPULAR  
PRICES  
THIS WEEK

Everything  
in  
Cutlery

---

A Little Better Quality;  
"Save the Difference."

**892nd** WEEKLY  
SALES

A Little Less Price.  
"Save the Difference."

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### IT'S NOT TOO EARLY

To think of Christmas. In fact, it will be here before you know it, and then you will have to hustle around and do your shopping in a terrible hurry, which, you know, is not the satisfactory way to do things. We would suggest that now is the time to do your planning and buying.

The house of Pickering's offers the greatest opportunities in Gift Selection. You can find some valuable tokens in Hardware, Cutlery, Tools, Kitchen Utensils and Electrical Devices. Gifts that can be used constantly with great profit, and at the same time act as an ever present reminder of the giver. Gifts for Boys and Girls, Men and Women. Hundreds of articles from which to select.

Our Salespeople Delight in Gift Suggestions.

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The Biggest Percolator Bargain Ever Offered.

### DOMESTIC ALUMINUM PERCOLATOR

Good Friend—There's a treat waiting in store for you when you drink coffee made by our Domestic Pure Aluminum Percolator. Coffee boiled in the old way loses its fine aroma and becomes bitter to the taste. Using our Domestic Coffee Percolator you save all this aroma and flavor. The grounds do not settle in the boiling water, result is, your second cup of coffee tastes like the first.

Domestic Pure Aluminum Percolator, 2-Quart size. Handsome Design. Made of Pure Aluminum; standard household size. The 'biggest Percolator Bargain ever offered.

This Week Only.....

\$1.79

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Sews a Lock Stitch Like a Machine

### THE SPEEDY STITCHER

A PERFECT SEWING MACHINE  
Mends Shoes, Awnings, Harness, Tents, Belts, Saddles, Suit Cases, Etc.

Repairing has been a continued source of trouble to Workman, Farmer, Teamster, etc. Often have you thrown away a pair of shoes, strap, harness, etc., simply on account of cost of repairing. The Speedy Stitcher is the latest invention—the most effective of anything in the form of an Automatic Sewing Machine ever offered. Its simplicity makes it a thorough practical tool in the hands of the most unskilled. With this stitcher you can mend Shoes, Harness, Tents, Awnings, Pulley Belts, Carpets, Saddles, Suit Cases or any heavy material.

The Speedy Stitcher is provided with a set of diamond-pointed grooved needles—including a special needle for tapping soles. A tool worth having. This Week, your opportunity.....

(By Mail 5c Additional.)

59c

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The Electric Sweeper With the Greater Section  
Regular Price, \$42.00—Demonstration Sale Price, \$34.50

### PICKERING'S BLUE RIBBON ELECTRIC CLEANER

Pickering's Blue Ribbon Electric Cleaner is the Electric Sweeper with the Greater Section. That's one of the reasons why it "Gets all the Dirt." The other reason is its reverse revolving brush, which picks up all hair, ravelings—paper scraps, lint, etc.

Absolutely simple. Just attach cord to the most convenient lamp socket, press the handy handle switch and you are ready to do your cleaning. The Blue Ribbon only weighs 10 pounds. You can almost lift it with your little finger. Regular price \$42.00. This week only.....

\$34.50

Marvel Ironing Machines—Wayne Electric Washers

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CINCINNATI  
MY HAPPY HOME

SAVE THE DIFFERENCE

## PICKERING'S

FIFTH & MAIN STS.

CINCINNATI  
MY HAPPY HOME

A Hardware Store Advertisement that Brought Big Returns Because of Human Interest Descriptions.

ferring to the department stores. We realized, that if our advertisements contained any 'knocking,' this would more than likely react to our disadvantage.

"But this matter of service is really a highly important point in the conduct of any business, and with us it has become almost the most important feature in our relations with the people of Cincinnati and a large

of that kind that we had in stock, all our blades, and that the chain drug stores sold very few.

"In some cases, a customer may apparently be interested only in price, and Pickering's must be in position to serve him, so we carry low priced lines, but wherever we have the opportunity the customer's attention is always directed to the better grades before the sale is completed, and it is explained to him that while the lower priced article will give such service as can be expected, the better quality of the higher priced item will far outweigh the difference in cost, and more than frequently the customer takes the advice and buys the better grade.

"That is another form of the service which we render to our trade, and it pays big returns in increased sales and profits.

"There are two degrees of service which a store may render. One is based on price only. Another has as its foundation real value. We go on the principle that an article of low intrinsic value or of low 'usefulness' or 'serviceability' is a poor bargain, no matter how low its price, and as such is not the sort that we can afford to sell.

"With us, the ruling principle is that of satisfaction—absolute satisfaction—to the customer. He must be pleased at all costs. That policy has made our business grow to its present high standing, and we are still pushing ahead."

In the accompanying illustration will be noticed a fair example of the kind of advertising used by Pickering's. Study the "descriptions" of the three items offered in this, their 892nd weekly advertisement.

And note that this is Number 892 in their series of weekly sales, all advertised in the Cincinnati papers. Keeping everlastingly at it, and Mr. Smith told the writer that they were not thinking of quitting on their advertising, even though the next couple of months might be dull ones. In fact, he said that most likely they would make their advertising just that much more intensive.

#### **Organizes Hardware Company.**

The Casmer Hardware Company has been organized at Pawhuska, Oklahoma, with a capital of \$100,000. The incorporators are: R. J. Morrow, D. T. Caspary, and F. G. Hetsel.

#### **William P. Bogardus Reaches the End of Life's Road.**

Long years of service to his fellow men and particularly to the hardware trade came to a close December 26, 1920, when William P. Bogardus reached the end of life's road. He passed away at his home in Mt. Vernon, Ohio, less than a month after the death of his wife.

He was born in Huntsville, Pennsylvania, in 1841, and moved to Ohio while yet a boy. He was at school in Oberlin, Ohio, when the Civil War broke out and he left to volunteer his services in the Union Light Guards, a company of Ohio cavalry.

In the early seventies he established a hardware firm of Bogardus and Company at Mt. Vernon, in which he took an active part for forty-seven years.

He was one of the pioneers in organizing hardware dealers of America and served three consecutive terms as president of the National Retail Hardware Association from 1903 to 1905 inclusive.

Besides being prominent in church affairs, he was a member of the G. A. R., the Loyal Legion, the I. O. O. F., the Mount Zion Masonic Lodge and the Local Chamber of Commerce of Mount Vernon.

#### **Trade Opportunities in Foreign Lands.**

The Bureau of Foreign and Domestic Commerce through its Special Agents, Consular Officers and Commercial Attachés, is receiving information of opportunities to sell hardware and kindred lines in several foreign countries. Names and locations will be supplied on request to the Bureau in Washington or its District Offices. Such requests should be made on separate sheets for each opportunity, stating the number as given herewith:

34250.—An American trading and export company with warehousing facilities, desires to be placed in communication with manufacturing firms in the Mississippi Valley and surrounding territory, who wish to co-operate in establishing sales offices for the export of goods for sale in Europe, South America, and the Orient. Reference.

34251.—A commercial agent in Germany who is familiar with Russia and the Russian language desires to be placed in communication with manufacturers and exporters with a view to securing their representation for the sale of goods in Russia. Reference.

34252.—A firm of general merchants in Australia desires to secure an agency or purchase outright general merchandise for sale in that country. Quotations should be given c. i. f. Australian ports. Payment to be cash against documents on arrival of goods. References.

34264.—A commercial agent in Argentina desires to secure the representation of firms for the sale of light tools, hardware, saddle and harness trimmings, harnesses, etc.

34254.—A commercial agency firm in Argentina desires to secure the representation of firms for the sale of hardware. References.

34261.—A merchant in Spain desires to secure an agency for the sale of agricultural tools, hardware, incubators, poultry supplies, etc. Quotations should give given c. i. f. Spanish port. Reference.

34262.—A sales company in Canada desires to secure the representation of a manufacturer for the sale of wrenches, pliers, and other small hand tools. This company does not desire to stock goods, but desires to sell from catalogues and samples. References.

34264.—A commercial agent in Argentina desires to secure the representation of firms for the sale of light tools, hardware, saddle and harness trimmings, harnesses, etc. Samples should be sent accompanied with catalogues and full particulars.

34268.—A commission merchant in Porto Rico desires to secure the representation of manufacturers for the sale of American goods. References.

34233.—The representative in the United States of a trading company in New Zealand desires to purchase agricultural implements, hardware, wire and fencing goods, and all other merchandise which would be used by farmers of a cooperative association. Quotations should be given f. o. b. American ports. Terms to be cash. Reference.

34235.—An American firm having a representative in Japan desires to secure an agency for the sale of tools, hardware, and iron and steel products. Reference.

34236.—A mercantile firm in England desires to either purchase or secure an agency for the sale of first-class quality of white enamel paint and turpentine. Quotations should be given c. i. f. English port. Terms: Cash on arrival of goods. Reference.

34239.—A firm in Spain dealing in paints, chains, rope, etc., desires to purchase American goods of these and similar lines. Correspondence and catalogues are preferred in Spanish.

34279.—A business man in Porto Rico desires to be placed in communication with manufacturers and exporters with a view to securing their representation for the sale of goods in Porto Rico and other Latin-American countries. No reference offered.

34282.—A mercantile firm in Bulgaria desires to secure



an agency for the sale of kitchen ranges, hardware, carpenters' machinery and tools, blacksmiths' and shoemakers' tools, etc. Quotations should be given c. i. f. Varna or Bourgas. Reference.

34285.—A company of merchants in Argentina desires to secure an agency from manufacturers for the sale of small hardware, enamel ware and pocket and table cutlery. Quotations should be given f. o. b. New York and c. i. f. Argentine port. References.

34288.—A mercantile firm in Australia desires to secure exclusive agencies from manufacturers for the sale of automobile accessories, automobile-brake lining, carpenters' and mechanics' tools, labor-saving machine tools, household and builders' hardware, and electrical fittings of all kinds. Catalogues are requested. Quotations should be given f. o. b. New York or c. i. f. Australian port. References.

34290.—A lumber company in Argentina desires to secure the representation of firms for the sale of galvanized iron, wire, etc., and also any other merchandise which would find a ready market in that country. No reference offered.

## Coming Conventions.

Texas Hardware and Implement Association, Adolphus Hotel, Dallas, Texas, January 18, 19, and 20, 1921. A. M. Cox, Secretary, 1808 Main Street, Dallas, Texas.

Western Retail Implement Vehicle and Hardware Association, Kansas City, January 18, 19 and 20, 1921. H. J. Hodge, Secretary, Abilene, Kansas.

Pacific Northwest Hardware and Implement Association, Seattle, Washington, January 18, 19, 20 and 21, 1921. E. E. Lucas, Secretary, Hutton Building, Spokane, Washington.

Missouri Retail Hardware Association, Planters Hotel, St. Louis, Missouri, January 25, 26 and 27, 1921. F. X. Becherer, Secretary, 5106 North Broadway, St. Louis, Missouri.

Mountain States Hardware and Implement Association, Brown Palace Hotel, Denver, Colorado, January 25, 26, 27, 1921. W. W. McAllister, Secretary-Treasurer, Boulder, Colorado.

Indiana Retail Hardware Association, Athenaeum Hall, Indianapolis, Indiana, January 25, 26, 27 and 28, 1921. G. F. Sheely, Secretary, Argos, Indiana.

Oregon Retail Hardware and Implement Dealers' Association, Portland, Oregon, January 25, 26, 27 and 28, 1921. E. E. Lucas, Secretary, Hutton Building, Spokane, Washington.

Kentucky Hardware and Implement Dealers' Association, Louisville, Kentucky, January 25, 26, 27 and 28, 1921. J. M. Stone, Secretary, Sturgis, Kentucky.

American Society of Heating and Ventilating Engineers, Philadelphia, Pennsylvania, January 25, 26, 27 and 28, 1921. Casin W. Obert, Secretary, 29 West 39th Street, New York City.

West Virginia Retail Hardware Dealers' Association, Huntington, West Virginia, February 1, 2, 3, 1921. James B. Carson, Secretary-Treasurer, Dayton, Ohio.

Nebraska Retail Hardware Association, Hotel Rome, Omaha, Nebraska, February 1, 2, 3 and 4, 1921. George H. Dietz, Secretary, Lincoln, Nebraska.

Indiana State Association of Sheet Metal Contractors, Hotel Dennison, Indianapolis, Indiana, February 2, 3 and 4, 1921. Ralph R. Reeder, Secretary, 314 East 16th Street, Indianapolis, Indiana.

Wisconsin Retail Hardware Association, Milwaukee, Wisconsin, February 2, 3 and 4, 1921. P. J. Jacobs, Secretary, Stevens Point, Wisconsin.

Oklahoma Hardware and Implement Association, Oklahoma City, February 8, 9 and 10, 1921. W. B. Porch, Secretary-Treasurer, Oklahoma City, Oklahoma.

The Michigan Retail Hardware Association, Grand Rapids, Michigan, February 8, 9, 10 and 11, 1921. Arthur J. Scott, Secretary, Marine City, Michigan.

North Dakota Retail Hardware Association, Fargo, North Dakota, February 8, 9, 10 and 11, 1921. C. N. Barnes, Secretary, Grand Forks, North Dakota.

Pennsylvania and Atlantic Seaboard Hardware Association, Incorporated, Convention and Exhibition, Philadelphia Commercial Museum, Philadelphia, February 8, 9, 10, 11, 1921. Sharon E. Jones, Secretary, 1314 Fulton Building, Pittsburgh.

Illinois Retail Hardware Association, Hotel Sherman, Chicago, Illinois, February 15, 16 and 17, 1921. Leon D. Nish, Secretary, Elgin, Illinois.

California Retail Hardware and Implement Association, San Francisco, California, February 15, 16 and 17, 1921. LeRoy Smith, Secretary, 112 Market Street, San Francisco, California.

Minnesota Retail Hardware Association, St. Paul Auditorium, St. Paul, Minnesota, February 15, 16, 17, 18, 1921. H. O. Roberts, Secretary, Metropolitan Life Building, Minneapolis, Minnesota.

Ohio Hardware Association, Columbus, Ohio, February 15, 16, 17 and 18, 1921. Hotel Headquarters, Deshler Hotel. Exhibition in Memorial Hall. James B. Carson, Secretary, Dayton, Ohio.

New England Hardware Dealers' Association, Mechanics' Building, Boston, Massachusetts, February 21, 22 and 23, 1921. George A. Fiel, Secretary, 10 High Street, Boston, Massachusetts.

Virginia Retail Hardware Association, Petersburg, Virginia, February 22, 23 and 24, 1921. Thomas B. Howell, Acting Secretary, Richmond, Virginia.

Michigan Sheet Metal Contractors' Association, Hotel Durant, Flint, Michigan, February 22, 23 and 24, 1921. F. E. Ederle, Secretary, 1121 Franklin Street, S. E., Grand Rapids, Michigan.

Iowa Retail Hardware Association, Savary Hotel, Des Moines, Iowa, February 22, 23, 24 and 25, 1921. A. R. Sale, Secretary-Treasurer, Mason City, Iowa.

New York State Retail Hardware Association, Rochester, New York, February 22, 23, 24 and 25, 1921. John B. Foley, Secretary, 607 City Bank Building, Syracuse, New York.

South Dakota Retail Hardware Association, Sioux Falls, South Dakota, February 22, 23, 24, 25, 1921. H. O. Roberts, Secretary, Metropolitan Life Building, Minneapolis, Minnesota.

Southern Stove Manufacturers' Association, Hotel Seelbach, Louisville, Kentucky, March 1, 1920. W. H. Cloud, Secretary, 216 Glendora Avenue, Louisville, Kentucky.

National Warm Air Heating and Ventilating Association, Cleveland, Ohio, April 19 and 20, 1921. Allen W. Williams, Secretary, Columbia Building, Columbus, Ohio.

Western Warm Air Furnace and Supply Association, Sioux City, Iowa, May, 1921. John M. Hussie, Secretary, Omaha, Nebraska.

Panhandle Hardware and Implement Association, Amarillo, Texas, May 8, 9 and 10, 1921. C. L. Thompson, Secretary-Treasurer, Dalhart, Texas.

Hardware Association of the Carolinas, Charlotte, North Carolina, May 10, 11, 12 and 13, 1921. T. W. Dixon, Secretary-Treasurer, Charlotte, North Carolina.

Southeastern Retail Hardware and Implement Association (composed of Alabama, Florida, Georgia and Tennessee), Atlanta, Georgia, May 17, 18, 19 and 20, 1921. Walter Harlan, Secretary, 701 Grand Theater Building, Atlanta, Georgia.

Sheet Metal Contractors' Association of Ohio, Hotel Gibbons, Dayton, Ohio, July 19, 20, and 21, 1920. William J. Kaiser, Secretary, 123 East Chestnut Street, Columbus, Ohio.

## Retail Hardware Doings.

### Minnesota.

K. E. Knutson will open a hardware business at Wadena February 1st.

### Missouri.

Sechrist and Sons are moving their hardware to their store on the west side of the street at Liberal.

Fred Lam has purchased a half interest in the Braymer Hardware Company's business at Braymer of R. J. Mansur.

George Zieke has sold his interest in the hardware and implement firm of Douglas and Zieke to William A. Luhrs, the new partner at Rockport.

A branch house of the Nichols Wire and Sheet Company of Kansas City, a wholesale hardware firm, is to be established in Joplin, according to C. O. Costello, district manager, in the Smith Hide Company's building, Tenth Street and Kentucky Avenue.

### Nebraska.

Frank McClure has taken charge of the Polk hardware business on West B. Street at McCook which was purchased some time ago.

### South Dakota.

C. J. Martin is busy superintending the moving of his hardware stock from its old location on Third between Walnut and Cedar to the new place across the alley from the Hentges Clothing Company at Yankton.

### Texas.

Charles G. Gray has purchased the interest of his partner, H. L. Hutchinson, in the hardware business recently at Cisco.

C. R. Clift has traded his hardware stock and some other property to J. H. Passell of Canadian for a tract of land near Canadian.

### Washington.

The Olympia Hardware store, on Main Street, Olympia, is undergoing a remodeling. The proprietors are Messrs. Blakeslee and Holcomb.

### Wisconsin.

Mike McGinley sold his interest in the implement business at Soldiers Grove to Melvin Turk. Mr. Turk will add a general hardware stock in spring.

Will Bisbell traded his farm for a hardware store at Woodford.

# Warm Air Heating and Ventilating

*Better Installations. How to Sell More Warm Air Heaters.  
Reports of Progress in Warm Air Heater Research Work.  
Ventilating Factories, Garages, Theaters, and Houses.*

## KEITH FURNACE COMPANY PLANS NEW FACTORY.

In order to obtain more space for production, made necessary by increased business, the Keith Furnace Company, Des Moines, Iowa, is planning to build a new factory at East 26th Street and Dean Avenue in that city.

The Keith Furnace Company expects to complete a part, if not all, of the plans by January 1, 1922.

The plant will be equipped with the latest facilities for manufacturing warm air furnaces and accessories.

The company has outgrown its present plant at 336 South West Eleventh Street, Des Moines, where it has been located for the past twenty-seven years.

## Convention Program of Heating and Ventilating Engineers.

That the high average of values established by previous conventions, will be maintained in the forthcoming annual meeting of the American Society of Heating and Ventilating Engineers is evident from the subjoined program:

### Program of Annual Meeting—1921.

#### American Society of Heating and Ventilating Engineers.

##### First Session.

Tuesday, January 25, 10 a. m.

Engineering Societies Building, New York City.

##### BUSINESS SESSION:

- Announcement of Quorum.
- Appointment of Tellers of Annual Election.
- Report of President.
- Report of Council.
- Report of Secretary.
- Report of Treasurer.
- Reports of Committees:
  - a. Executive Committee.
  - b. Finance Committee.
  - c. Publication Committee.
  - d. Membership Committee.
  - e. Committee on Revision of Constitution.
- Unfinished Business.
- Report of Tellers of Annual Election.
- New Business.
- Adjournment of Meeting to Philadelphia for Professional Sessions.

##### Second Session.

Wednesday, January 26, 10 a. m.

Clover Room, Bellevue-Stratford, Philadelphia, Pennsylvania.

##### PROFESSIONAL SESSION:

- Addresses of Welcome.
- President's Address.
- Resume of Business Session at New York.
- Reports of Technical Committees
  - a. Committee on Code for Testing Low Pressure Heating Boilers.
  - b. Committee on Standard Code for Testing Heating Systems.
  - c. Committee on Steam and Return Main Sizes.
  - d. Committee on Schoolhouse Standards.
  - e. Committee on Standard Method for Testing Air Washers.
  - f. Committee on Furnace Heating.
  - g. Committee on Chapter Relationship.
- Discussion of Code of Ethics.

##### Third Session.

Wednesday, January 25, 8 p. m.

Clover Room, Bellevue-Stratford, Philadelphia, Pennsylvania.

##### CHIMNEY SESSION:

Discussion of Model Chimney Ordinance proposed by the

National Board of Fire Underwriters.

Paper: Radial Brick Chimneys, by W. F. Legge.

Paper: Steel Smoke Stacks, by W. E. Goldsworthy.

Paper: Some Comparative Tests of 16 inch Roof Ventilators, by Dryden, Stutz and Heald.

##### Fourth Session.

Thursday, January 27, 10 a. m.

Clover Room, Bellevue-Stratford, Philadelphia, Pennsylvania.

##### RESEARCH SESSION:

- Report of Chairman of Committee on Research.
- Paper: Theory of Dust Action, by O. W. Armspach.
- Paper: Efficiency of the Palmer Apparatus for Determining Dust in Air, by S. H. Katz, R. S. Longfellow, A. C. Fieldner.
- Paper: Physiological Heat Regulation and the Problem of Humidity, by E. P. Lyon.
- Paper: A Study of the Infiltration of Air in Buildings, by O. W. Armspach.
- Paper: The Transmission of Heat Through Single-Frame Double Windows, by A. Herman Shaw.

##### Fifth Session.

Thursday, January 27, 8 p. m.

Clover Room, Bellevue-Stratford, Philadelphia, Pennsylvania.

##### FUEL SESSION:

- Paper: Pulverized Coal for Power Plants, by F. A. Schaffer.
- Paper: Briquetted Coal for Household Fuel, B. J. N. Kennedy.
- Paper: Economizers, by W. F. Wurster.
- Topical Discussion: Pulverized Peat Fuel.

##### Sixth Session.

Friday, January 28, 2 p. m.

Clover Room, Bellevue-Stratford, Philadelphia, Pennsylvania.

##### PROFESSIONAL SESSION:

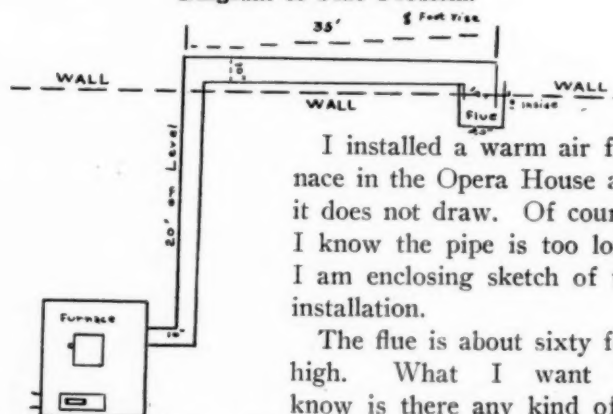
- Paper: Forced Hot-Water Circulation Heating Systems, Girard Estate, Philadelphia, Pennsylvania, by Robert Hughes.
- Paper: Accelerated Hot-Water Systems, by A. J. Wells.
- Paper: Influence Upon Boiler Economy of Continuous Firing With Highly Volatile Fuel Without Intervening Cleaning, by A. B. Rusk.
- Paper: Design of Large Boiler Plants, by J. Grady Rollow.
- Paper: Proper Selection of Hot-Water Heating Devices for Domestic Service, by A. Busager.
- Paper: Method of Utilizing Heating Systems for Cooling Rooms in Summer by A. M. Feldman.

## Presents a Flue Problem.

TO AMERICAN ARTISAN AND HARDWARE RECORD:

I have a furnace problem I would like you to publish in your magazine.

### Diagram of Flue Problem.



I installed a warm air furnace in the Opera House and it does not draw. Of course, I know the pipe is too long. I am enclosing sketch of the installation.

The flue is about sixty feet high. What I want to know is there any kind of a hood or cap head that I can use on the smoke stack so that I would not have to run it all to the top of the building.

De Quoin, Illinois, January 5, 1921. IG. KOERNER.



# Perfect Combustion Is Not Only a Matter of Fuel Economy, But Is Also an Important Factor of Health.

*The New Science of Aerology Will Enable the Furnace Trade to Provide Better Conditions for Health, Comfort and Economy.*

*Address on "The Warm Air Furnace of the Future," by L. W. Millis, of Security Stove and Manufacturing Company, Kansas City, Missouri, delivered to the Annual Meeting of Western Warm Air Furnace and Supply Association in Chicago, Illinois.*

This subject, "The Warm Air Furnace of the Future," seems to me to be especially important in the territory served by this organization. At our last meeting Mr. Menk gave us some excellent information, which will lead to improvements.

I presume some persons might think the subject indicated an attempt at prophecy. But I assure you I shall only try to sort out some things that seem certain, and from that premise endeavor to indicate the part the Warm Air Furnace may be expected to play in the requirements of the future.

**The Three Outstanding Factors.**

All will agree with me that good combustion of fuel or fuel conservation, and conservation of material used in the construction of the furnace, and the new science of Aerology, so far as it relates to health and comfort, are three big outstanding factors in the demands that may be made on the warm air furnace. Of course, there are other factors, but these three are dominant.

We can easily recall the panic of fuel conservationists during the war. We can also recall how far we in the western territory are from anything but low grade coal, and with what alarm we viewed a general use of such fuel as is most easily obtainable; not because the coal does not have heat in it, but because of the problems connected with it, that furnace men have not yet solved.

The use of gas and oil will not probably become general. It is possible that fuel prepared from coal may play an important part in the future, but a vast territory will depend on coal as it comes from the mine. For lack of a better name we might call it raw coal. This, I think, is the central fact of our big problem. When a low grade coal is fired one of the principal difficulties encountered is black smoke.

**Why Some Coals Yield More Smoke.**

Perhaps it would be advantageous to inquire a little into the reasons why some coals yield more smoke than others. This table shows the approximate composition of various well known classes of coal and the theoretical amount of air required to carry the oxygen necessary to burn each part of the coal:

CUBIC FEET OF AIR REQUIRED FOR PERFECT COMBUSTION OF ELEMENTS IN ONE POUND OF COAL.				
Kind of coal	Percentage of volatile gas matter	Percentage of fixed carbon	Cubic feet of air required to burn the volatile matter in one pound of coal	Cubic feet of air required to burn the fixed carbon in one pound of coal
Pennsylvania Anthracite .....	3.2	88.7	7.4	134.8
Semi Hard or Arkansas Anthracite .....	9.4	83.6	21.6	127.0
Semi Bituminous or Semi Anthracite .....	19.2	71.2	44.2	108.2
Bituminous .....	46.2	40.9	106.3	62.2

One pound Fixed Carbon requires 152 cubic feet of air.  
One pound Volatile Gases requires 230 cubic feet of air

We will consider the two extremes only. Anthracite has such a small amount of volatile matter and it is liberated so slowly that the required amount of air can be successfully admitted over a period of several hours.

**What Happens to the Volatile Matter.**

Now let us see what happens when we try to burn bituminous coal containing, say, 46 per cent of volatile matter. Some portions of the volatile matter ignite at the comparatively low temperature of 700 degrees.

The fixed carbon ignites at from 900 to 1,000 degrees. It is manifest that if the fire is hot enough to ignite the fixed carbons that the volatile matter will be liberated and driven off rapidly.

If air enough is admitted to consume it, greater heat is evolved than the average requirements, and if combustion is retarded, much of the matter is lost.

The union of carbon and oxygen will be unstable, and when it comes in contact with surfaces of 700 to 800 degrees temperature it will decompose to soot, some clinging to the cool surface and some passing up the chimney.

**A Simple and Convincing Experiment.**

A convincing experiment is to fill Paddy's clap pipe with coal rich in volatile matter, and seal the top to prevent air from reaching the coal; heat the pipe in a gas flame and note that the gas coming from the stem of the pipe can not be lighted.

But if the gas be mixed with hot air, or if the gas be heated in the stem, it can be ignited.

If a saucer be held over the flame soot will appear on the saucer, but the hotter the gas or the air, or both, before igniting, the less the amount of soot will be.

This illustrates that the volatile gases are easily liberated from the coal in such condition that they do not burn economically. An examination of the clay pipe will show considerable unconsumed carbon, as well as ash.

**Smoke-Consuming Devices.**

There are many devices intended to help in the combustion of this volatile matter. Many of them really do lower the amount of visible smoke.

Let us see what else they do. In order to simplify the illustration and get over the figures easily let us assume one pound of fixed carbon and one pound of volatile matter in a furnace.

The pound of carbon requires 152 cubic feet of air and the pound of volatile requires 230 cubic feet for correct combustion. If, by chance, the drafts are properly porportioned and set so that the correct amount of air is admitted for each requirement, the

combustion may be good, but the volatile matter will be consumed first and only enough air will then be required for the fixed carbon.

#### Reducing Air Supply at Right Time.

Unless the air supply is reduced at the proper moment there will be air at the rate of 230 cubic feet per pound of the remaining carbon in excess of the 150 cubic feet already supplied, passing to the chimney.

On its way it absorbs heat already created. This usually extends over a long period and causes much loss. I refer those of you who want details of the loss thus occasioned to the works of any combustion engineer, especially to Jos. W. Hays.

COOLING EFFECTS OF EXCESS AIR.

Percentage of air added to minimum	Ideal temperature of combustion	Loss of temperature due to excess air	Percentage of ideal temperature
0.	5132.	0.	100.
50.	3543.	1589.	69.
175.	1997.	3135.	38.9
200.	1835.	3295.	35.8

Please notice that the 230 cubic feet of excess air just mentioned is very nearly 175 per cent in excess of the 150 cubic feet and that the resulting efficiency would appear to be as low as 39 per cent.

You are familiar with the process of combustion in our various furnaces.

First the air is drawn through a bed of ashes and partly consumed coal. Then through a stratum of live coal in which one atom of carbon unites with two atoms of oxygen, and evolves the largest possible amount of heat.

It continues on its way through more carbon and the extra atom of oxygen picks up another atom of carbon and becomes carbon monoxide.

Bear in mind that burning of carbon monoxide yields about one-third as much heat as when carbon dioxide is produced. If more hot oxygen is admitted at this point carbon dioxide will again be produced and greater heat evolved.

I have indicated that efforts to introduce it in only required amounts have not been as successful as I think the future will demand.

When fuel is burned in a power plant the man in charge burns the fuel as fast as circumstances will permit, aiming always to obtain a short flame of very high temperature. This is only even approximated by constant attention.

In domestic use the process is nearly reversed. Attention is almost nothing. The rate of combustion is low and the average fire temperature is low.

So far furnace men have regarded these things as unavoidable in a domestic heater. I hold that if the power man is right then the domestic heater must approximate his results.

#### The Problem of Low Efficiency.

We have then the problem confronting us of low efficiency without so much soot, and a consequent waste of nature's store of coal, or the alternative of soot discharge from the chimney. And it may be well to stop here and inquire if the future has anything in store for us along sooty lines. Soot and other forms of dust are so closely allied that it is difficult to study soot alone.

You go into a dry goods store and are shown goods. They are drawn along the counter. The counter is cleaned by the process but some dust is

ground into the goods. Part of this dust is soot, and part of that soot came from our warm air heaters.

#### Financial Loss Caused by Soot.

The financial loss occasioned by dust is indicated in the spoiling of lace curtains, rugs, wall paper, pictures, roofs, paint on our buildings, and expense of trying to keep up a cleanly appearance.

The loss is beyond calculation and while the furnace is guilty it is not more guilty than many other forms of heater. Still it is guilty. But if the waste of nature's stores and the financial loss was the strongest indictment I would not likely be devoting my time toward a correction of the evils.

*Our greatest asset is health.* If this problem of soot is affecting the health of the community then it is a problem of the first magnitude, and we may be excused for devoting a few moments to it, to ascertain if the warm air furnace man has a duty to perform.

#### Menace of Air-borne Diseases.

Two general classes of diseases are feared by civilized man. One is called air-borne diseases of which tuberculosis is an example. The other is ground diseases, or diseases which spread by contact with coarse material things, and of which typhoid is an example.

They are sometimes called filth diseases because they are spread through bad sewage disposal, or foul water supply.

In earlier ages great plagues swept the earth. They were ground diseases, but fortunately, they are so well under control that they no longer strike terror to communities or even to war camps.

When a crowded city like Chicago can point to only twenty cases of typhoid in a year, and most of them traceable to outside sources, it does look as though the claim of reduction is justifiable. On the other hand, those connected with the new science, Aerology, tell us that air-borne diseases are increasing, and their explanation involves the warm air furnace.

#### Warm Air Furnace Is Health Factor.

If in any way the warm air furnace is a factor for good health we should urge its use to the utmost. If in any way it is an obstacle to good health it is a heavy obligation to correct its faults, or at least put it at the bottom of the list of offenders.

Let us then see what this science Aerology thinks it has found out. First, the air itself is never bad. That all air is fresh. Air bottled (in bond I suppose), a hundred years would be as fresh when liberated as the so-called fresh outside air.

But the bottled air, or the outside air, or air in a building may be mixed with other things, such as the pollen of plants, dust from the ground, poisonous or non-poisonous gases, odors, water, ashes and soot.

#### Germs Ride on Dust Particles.

Second—They claim air itself does not carry the so-called air-borne disease germs, but that every particle of dust or soot is a vehicle for a germ to ride upon.

But air carries dust, and of course indirectly carries all this bacteria stuff directly into our throats, nostrils and lungs, and if it lodges in a proper, or



rather in an improper, place, starts a culture that helps doctors, druggists, hospitals and undertakers.

Third—They have carefully mapped out conditions of the air directly related to health and comfort; such as temperature, humidity and motion of the air.

It hardly need be noted that the warm air furnace can deliver any temperature the aerologist suggests, and that it is the only heating device that can adequately humidify the air, at least at any reasonable cost.

And unless the air is in motion a warm air furnace can not work at all. It would, therefore, seem that the warm air furnace can meet that much of their requirements better than any other reasonable priced heating device.

#### **Opportunity to Serve Mankind.**

We are thus assured of an opportunity to serve mankind, feeling that so far for the purpose intended our wares are the best in the world.

There still remains, however, the grave indictment of dust. Ground diseases have been put under control largely by corrective legislative control of water supply and of sewage disposal.

This was coincident with the general education of the public on the subject. We know that many cities regulate the amount of black smoke that may be emitted from power chimneys or large apartment and office building chimneys.

I think it is reasonable to assume that the onward march will bring us to a day when domestic chimneys will be subject to the same regulation and no longer allowed to pollute the air with bacteria transportation facilities.

At present the only practical, economical, method available to eliminate smoke in domestic work is to buy smokeless coals, but the cheaper coals are everywhere.

I do not believe I am holding a man of straw before you when I say that in addition to conservation of material as suggested by Mr. Menk, that the Warm Air Furnace of the Future must meet the problem of better combustion.

It must present an opportunity for the slow gasification of the volatile matter in any kind of low grade raw coal, and that combustion of such matter must not take place at a lower temperature than that of the burning fixed carbon, so that the fire may approximate the qualities of anthracite coal fires.

This accomplishment would save many tons of coal, and also lessen the means of transporting disease germs to our friends and neighbors.

I feel certain that when the men of the Western Warm Air Furnace and Supply Association realize the obligation placed upon them that we will rise to the emergency.

#### **What Remains to Be Done.**

We must offer to the world a furnace that extracts from every kind of low grade coal the maximum amount of heat, and does not in any way add to the increase of air-borne diseases, or to the frightful financial loss from dust; and requires even less attention than present furnaces; and requires no more intelligence or experience than the average furnace now requires; and install them so that the tempera-

ture, the humidity and the air motion coincide with the requirements of the human body.

When we do this our service to humanity will be so beneficial that we can be assured of reward commensurate with the magnitude of the work.

#### **Uses AMERICAN ARTISAN to Teach Furnace Dealers.**

That the practical value of articles in AMERICAN ARTISAN AND HARDWARE RECORD is fully recognized is demonstrated by the following letter sent to prospective dealers by the Excelsior Steel Furnace Company, 114-118 South Clinton Street, Chicago, Illinois:

"On page 78 of the December 25th issue of AMERICAN ARTISAN AND HARDWARE RECORD you will find an article of genuine interest to every furnace installer and user.

"We do not know by whom it was written, neither is it an advertisement.

"It treats of oversized furnaces. Coupled with this article are expressions from furnace installers explaining the advantages of installing a furnace amply large and we are wondering if you have ever thought of the many times the sale was lost by insisting on the installation of one-size-larger furnace.

"The vital point is to figure a heater of ample size, procure the contract and deliver satisfaction.

"Smith tells the buyer that a 21-inch firepot furnace will easily heat his home satisfactorily. You tell the buyer it requires a 22-inch or even 23 or 24-inch firepot, but how often it happens that you are unable to obtain the difference in price.

"We long ago realized the necessity of supplying a furnace that would meet these conditions and have been marketing for the past several years just the article needed.

"We can refer you to large numbers of dealers who will tell you that Excelsior oversized-firepot furnaces are the easiest selling line they ever handled.

"Excelsior firepots are 20 to 40 per cent oversized and when you show a buyer that you can give him a furnace that is rated and priced at its minimum and not its maximum capacity, it permits you to meet almost any competition and affords you the opportunity of making more sales at better profits.

"We will be very glad to check this matter over with you as the dealer who has the Excelsior agency has a very decided advantage over his competitor.

"Our terms are liberal, our prices are very low and a sample on your floor will prove beyond a doubt our statements. Shall we reserve this agency for you until our salesman arrives?

"Yours for greater sales and profits.

"THE EXCELSIOR STEEL FURNACE COMPANY."

#### **Get Out of Your Armchair.**

Business is just as good as it ever was.

The apples on the higher branch of a tree are fully as savory as those within easy reach.

The only difference is that you have to exert yourself more to get the apples that are farther up the tree.

You will have to stir out of your armchair these days to get more furnace business.

# Practical Helps for Tinsmiths

*No Two Jobs Are Exactly Alike. Therefore, the Sheet Metal Worker Has to Meet Each Difficulty as It Comes. Send Your Problems to Us. Let Our Experts Help You.*

## **SENDS PATTERN FOR WHEAT TANK REQUESTED BY SUBSCRIBER.**

TO AMERICAN ARTISAN AND HARDWARE RECORD:

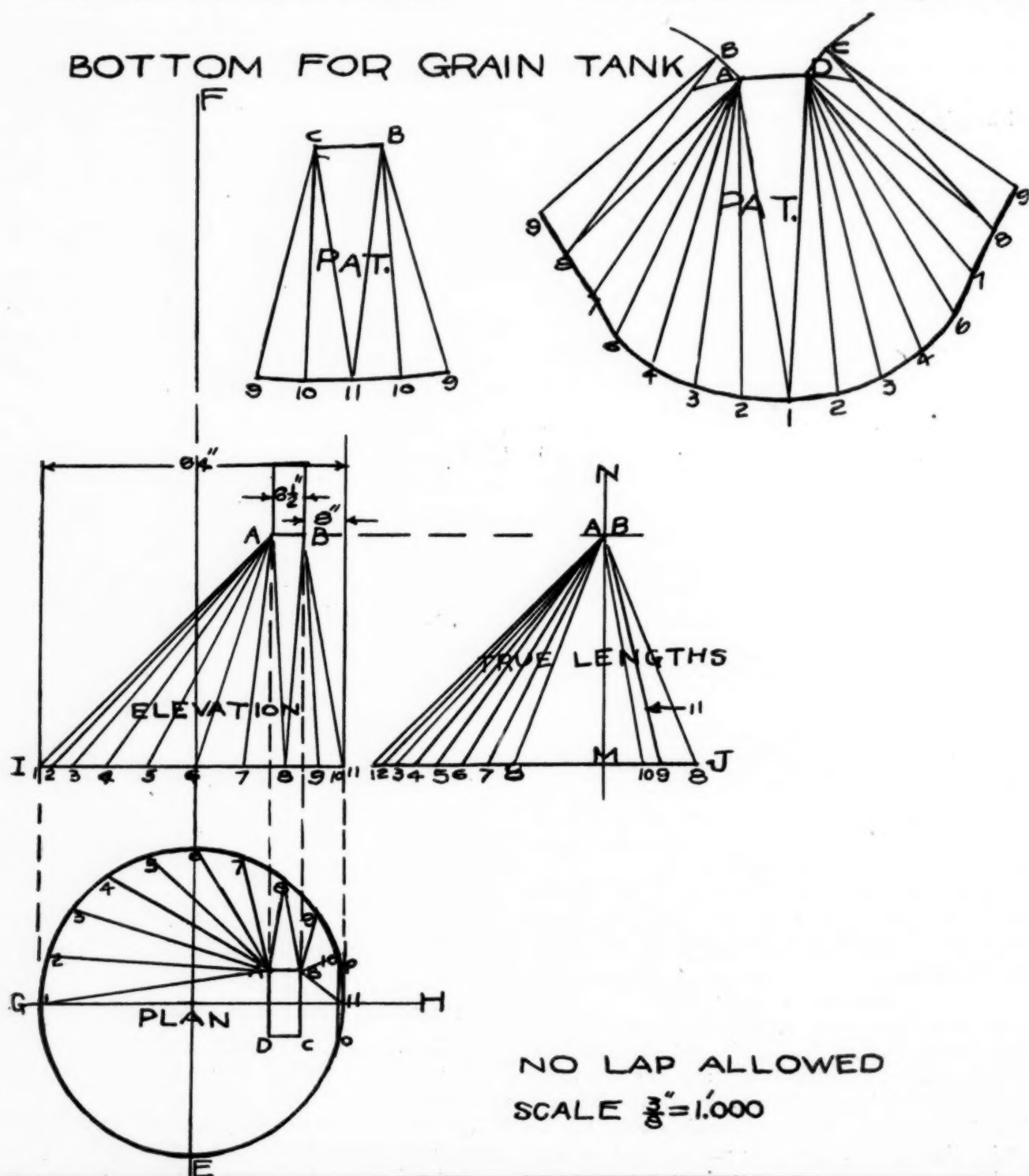
Enclosed find development of pattern for bottom of Wheat Tank, asked for by J. M. Campbell, Lincoln, Nebraska, in the December 25, 1920, issue of AMERICAN ARTISAN AND HARDWARE RECORD.

Draw any two lines as GH and EF, perpendicular to and intersecting each other.

With a radius equal to 32 inches and the intersection of GH and EF as a center, scribe a circle.

With radius equal to  $\frac{1}{2}$  of long side of rectangular opening and point 11 as center, scribe arcs intersecting circle at points P and O.

With P and O as centers and radius equal to 8 inches,



Pattern for Bottom of Wheat Tank in Answer to Problem of J. M. Campbell.



scribe arcs inside of circle as shown.

On these arcs 7 inches from GH and perpendicular to GH, locate points B and C.

Lay out rectangular opening with dimensions given from points B and C. This completes the plan view.

At any convenient distance from and parallel to GH draw I-J.

Erect perpendicular projectors from points I and II of plan and locate points I and II on line I-J.

Project lines perpendicular to GH from points A and B of plan and prolong them indefinitely.

From point I on line I-J draw line I-A at 45 degrees; draw A-B parallel to I-J.

Connect point B and point II on line I-J. This completes the side elevation of the bottom of tank.

As both sides of the bottom are alike, it will only be necessary to use  $\frac{1}{2}$  of the plan view in the development of the pattern.

Divide  $\frac{1}{2}$  of the circumference of the plan into any number of equal parts, as 1-2-3, etc., and from points 1-2-3, etc., in plan erect perpendicular projects to points 1-2-3, etc., in elevation.

Connect point A to points 1-2-3, etc., up to point 8, and point B from point 8 to point II, both in plan and elevation.

At any convenient distance on I-J draw M-N perpendicular to I-J. On M-N locate point AB equal to the vertical height of elevation.

With the distances A-1, A-2, A-3, etc., respectively, of plan locate the distances M-1, M-2, M-3, etc., respectively, along I-J. Connect the points 1-2-3, etc., on I-J, to the points A and B as shown.

This constitutes the true lengths of lines A-1, A-2, A-3, etc., of elevation.

The pattern can be laid out in any number of pieces.

The method employed would be the same. In this case I have divided it into two pieces as the construction would be easier that way. My patterns are divided on lines B-9 and C-9.

Take the distance A-1 true lengths and scribe an arc in any convenient position. Select any point on the arc as point A.

Then with the distance A-D in plan (this is a true length) and A as a center scribe in arc, intersecting the original arc at the point D.

Connect A-D with a straight line, to form one side of the rectangular opening.

With 2-A, 3-A, 4-A, etc., respectively, up to point 8, and with A-D as centers, scribe arcs near each other.

With distances 1-2, 2-3-3-4, etc., of plan, and starting with point I already located in pattern, locate points 2-3-4, etc., in pattern up to point 8.

From point 8 with 8-B as radius and 8 as center, scribe arcs near A-D. Then with the distance A-B in plan as radius and A-D as centers locate points B-C as shown.

Now with distances B-9, B-10, B-11, as radii and B and C as centers, locate points 9-10-11 in pattern as illustrated.

To complete pattern, trace line through points I to II and allow necessary lap.

A. E. HERROLD,  
3606 Rollins Avenue.

Des Moines, Iowa, December 28, 1920.

### **St. Louis Sheet Metal Folks Enjoy Annual Banquet.**

The sheet metal trade of St. Louis, Missouri, has learned the fine art of humanizing industry by making good fellowship the vital part of business.

Every day of the week there is friendliness among the sheet metal folk of St. Louis. It is natural, therefore, that when they come together in their annual banquet they should present to the observer the picture of one big family reunion.

That, in effect, was what the joint Eleventh Annual Banquet and Installation of Officers of the Sheet Metal Contractors' and the Sheet Metal Consumers' Protective Associations of St. Louis was as the members and their friends and womenfolk gathered January 8, 1921, at the City Club, Board of Education Building, 907 Locust Street, St. Louis.

The President of the National Sheet Metal Contractors' Association of the United States, Arthur P. Lamneck, installed the newly elected officers and gave an instructive talk outlining the duties of each and exacting a pledge from them to do their full share during their term of office.

E. B. Langenberg introduced the Toast Master, George E. Kohlmeyer, who saw to it that not the faintest hint of dullness crept into the evening's proceedings.

A number of visitors from nearby cities were present, including John J. Foster, Secretary of the Springfield, Illinois, Sheet Metal Contractors' Local.

George P. Werner, Galveston, Texas, Third Vice-president, of the National Association, was also in attendance.

The following are the officers for 1921 of the Associations:

#### **Sheet Metal Contractors' Association.**

President: WILLIAM SCHWARTZ;  
Vice-president: HENRY STARK;  
Secretary: GEORGE CARRAHER;  
Treasurer: C. H. WAND.

#### **Sheet Metal Consumers' Protective Association.**

President: GEORGE WALCHLI;  
Vice-president: H. H. HARRIS;  
Secretary: WILLIAM KOELSCH;  
Treasurer: FRANK T. BOKERN.

### **Milwaukee Sheet Metal Local Elects Officers.**

The January meeting of the Master Sheet Metal Contractors' Association of Milwaukee, Wisconsin, held Wednesday evening, January 5th, was devoted chiefly to the election of officers for the ensuing term. The following were selected:

President: WILLIAM HAMMAN;  
First Vice-president: HENRY PLUCKAM;  
Second Vice-president: LOUIS BURMEISTER;  
Secretary: EDWARD HOFFMANN;  
Treasurer: JOSEPH HOLLITZ;  
Sergeant-at-Arms: ADOLPH SCHUMAN;  
Executive Committee: R. JESKE, E. B. TONNSEN and JOHN MILLEN.

The Secretary, Treasurer, and Sergeant-at-Arms were re-elected to their respective offices.

# Optimism Is One of the Best Means to Acquire Big Profits as Well as to Hold Good Will and Prosperity.

*If We Want to Be Optimists, We Must Learn to Recognize and Make Good Use of All the Possibilities of New Business.*

Written Especially for AMERICAN ARTISAN AND HARDWARE RECORD by J. C. Greenberg, Peoria, Illinois.

(Copyright, 1921, by J. C. Greenberg.)

To give an illustration of an optimist, I want to cite an instance which will clearly illustrate the point.

A life insurance salesman was trying to sell a mechanic a policy. It was a difficult job, and the salesman was at his wits' end. To cap the climax, just as he had his prospect going right, the baby fell off the high chair and threw the family into confusion.

The salesman was a true optimist. He turned this seeming disadvantage into profit. He saw a truth in this accident which was a benefit.

He did not get excited and give up hope, he simply approached the child, picked it up gently and said to his prospect:

"Jim, this child is the best reason on earth why you should take out the policy I suggested."

That was all he said. He drove the nail all the way in, and Jim signed up.

You see, an optimist is the one who can see actual good that is invisible to others.

There was no fallacy in the salesman's judgment. He stated a fact. It is the same in business. If we as business men can see an actual good amidst what seems to be bad, we can point out a truth and take advantage of it.

Prices have tumbled in the same manner as the child tumbled off the high chair, but it is not a calamity.

It has its good features which will aid all of us. Here is how it works out.

When prices were high, there were less goods sold and when less is being sold, the demand is small, and the manufacturers produce less. A lesser production does not require so many workmen and they are laid off.

If the laboring man is laid off he has no money with which to buy. This directly affects the merchant who gets no profit, and he in turn can not buy from the manufacturer.

Business is interdependent. It can not exist unless everybody is able to do his share. Then the optimist,

the true optimist says to us: "The tumble of prices is a good thing. Things are getting cheaper, and people are buying more. When people buy more the manufacturer makes more and will employ more men who will have money to spend and thereby give the merchant profits with which to buy more goods to sell."

The optimistic business man looks at it this way and lays out a system based on fact. He reasons this out in a manner of his own. He says to himself:

"If I buy now, I will help to employ labor who will in turn spend the money they earn. This will create business, and I will earn profit. But if I strike and do not buy, the present supply of goods will dwindle down in the warehouses because the manufacturer will not make up any. This in turn will decrease the supply and make things scarce. When goods are scarce, the price is always high and at high prices, things are hard to sell. When things are hard to sell, few sales are made, and less profit. Therefore I must buy now in order that those who need things will have money with which to buy because they will have work."

If we want to be optimists, we must see the advantage in a truthful and sane way. The optimist

sees a true and logical reason for immediate action to stimulate profits. You can see the advantage in the present disadvantage. If you do see it, and act accordingly, you are an optimist. But if you cry wolf, you are a fool.

Merchants are not buying and expect to get profits without having anything to sell. They are losing more money by not selling than by selling below cost.

Business is action. Inaction is business suicide.

Pessimists are cowards because they stop cooperation. They are trying to live a successful business career on nothing. It is like a starving camel who is trying to live by eating his hump. It can not be done. It is impossible.

It simmers down to this, that fear is the deadliest foe

**Not to be satisfied with less than the best and always to seek the good qualities in men and things is what it means to be an optimist.**

**From the point of view of happiness and progress nothing is to be gained by worry.**

**On the contrary, damage is done by worry—damage to health, to business, to production and to prosperity.**

**The resources of our country and the skill and talent of our people have not been diminished, nor has our standard of living been lowered.**

**The present industrial depression, therefore, has no basis in physical conditions of farming or manufactures.**

**It is a state of mind rather than a state of things. The remedy for it is optimism.**



to success. He who fears is not an optimist, but he who reasons out the situation, and sees the good in a truthful manner and acts accordingly is a true optimist and a true prophet.

Hoping for the best is rot. Working for the best is constructive and profitable. Base your business judgment on true ideas founded on logical facts and you will be a true optimist and will spread happiness all round.

You must understand your business so well, that you will see things straight. Do not listen to the man who says to you "Don't worry old man all will be well."

Make him tell you why all will be well, and when he proves his point, reason it out in your own way. If your reasoning powers verify his statements, he is an optimist. If his advice shows flaws, he is a plain fool.

Optimism is based on knowledge. It is based on fact. No man can be a true optimist and guess that clouds are sunshine. Clouds are clouds and no man can make them anything else. But the man who is wise enough to understand how the wind blows, and which way the clouds are drifting can predict when the sunshine is due. There are too many guessers and too few truthful optimists.

An optimist must be able to see the speck of good and nurse it so it will grow and develop. He must be like the prospector after gold. The gold ore is not good to look at as a whole. It is only the tiny shining specks that proclaim the pure gold.

The prospector actually sees only the gold, because it is there. He is an optimist. But the prospector who only sees the ore, and is discontented with the tiny specks will never get the gold. He is too pessimistic, and does not deserve the gold.

A business is like gold ore. The entire business as a whole is gold ore, and the profits are the tiny specks. The wise business man sees these glittering specks, gathers them, and eventually has a bag full of pure gold.

Be an optimist! See the glittering gold. Gather it and be successful but do not only guess that the gold is there. Make sure of it.

The time has come when a business man must be a real business man. The buying price paying debauch is over. From now on, it will be a real test of business ability. It will be a pure optimist's program.

Your test as a business man is really shown when you use true business ability. Landslide profits are gone. It is now a matter of brain and business ingenuity. It is an optimist's world, a doer's world, a world of real legitimate endeavor.

Learn to see the benefits and take advantage of them. Business will be wonderful for those who are really optimistic in the true sense of the word.

All others would better sell out while the chance is good.

The ore is on the surface and full of gold specks.

### **Program of Indiana Sheet Metal Convention.**

Practically all the details have been completed for the program of the Indiana State Association of Sheet Metal Contractors' Convention which is to be

held February 2, 3 and 4, 1921, at the Hotel Dennison, Indianapolis, Indiana.

An exhibit of sheet metal products and supplies will be held in connection with the convention.

It is hoped that Professor A. C. Willard of the Illinois University will be able to attend the convention and give an address on the results of the warm air furnace tests carried on by the Engineering Staff of the University of Illinois.

A Question Box will be used at every session. It will be in charge of A. George Pedersen, of AMERICAN ARTISAN AND HARDWARE RECORD.

The principal topics to be discussed are:

"Cost Accounting, and Overhead Expense," with blackboard demonstrations;

"Fire Prevention and Its Relation to Sheet Metal Work," by Mr. Curran of the Indianapolis Salvage Corps;

"Sheet Zinc and Its Use," by a representative of the American Zinc Institute;

"Apprenticeship," by George Harms, past president of the National Association of Sheet Metal Contractors;

"Why an Auxiliary?" by E. W. Norman, President, Indiana Salesmen's Auxiliary.

Besides the business sessions, there will be a theatre party for the ladies 2 o'clock Thursday afternoon, February 3rd. Other entertainment has been provided for the ladies during the convention, under the direction of the committee in charge of Mrs. Ralph R. Reeder, wife of the State Secretary.

Thursday evening, February 3rd, a banquet will be given in the Rainbow Room of the Severin Hotel for all those attending the convention.

The election of officers for the ensuing year will take place at the afternoon session of Friday.

A hearty invitation to attend the convention of the Indiana State Association of Sheet Metal Contractors was extended to all sheet metal contractors of the state whether they are members of the Association or not.

### ***Calls a Convention to Organize Sheet Metal Men of Iowa.***

As a result of a favorable, preliminary canvass of the trade, it has been decided to call a convention to organize a State association of the sheet metal contractors of Iowa.

The date fixed for the convention is February 23rd. The sessions will be held in the Chamber of Commerce Rooms, Des Moines, Iowa.

The convention is to be held during the same week when the Iowa Retail Hardware Association is meeting in Des Moines.

There will be no sessions of the hardware convention in the afternoon. Hence hardware dealers who have a sheet metal shop in connection with their business will be free to attend the sheet metal convention as well as the hardware convention.

It is said that the snipe has a nerve running clear down to the end of his bill. The plumber must be that kind of a bird.

### ***Dreis and Krump Produce New Steel Slitting Shear.***

A new steel slitting shear has just been placed on the market by Dreis & Krump Manufacturing Company, Chicago, Illinois.

It is named the Chicago Steel Slitting Shear. The frame is pressed from a steel section, which makes the machine very strong and durable.

This machine, which is constructed of steel throughout, will cut 2 inches by 3/16 inch bars, 10 gauge sheets, brake band lining, belting, etc.

It is operated by a geared lever which gives greater power than eccentric shears.

The construction permits sheets of any length to pass through after being cut.

An adjustable hold-down is provided. Knives are of high grade crucible steel. All parts are interchangeable. Weight of machine is 22 pounds.

This is a very handy machine for all classes of work and will prove a useful tool in sheet metal shops, factories, garages, etc. It is sold at a remarkably low price.

Further particulars may be obtained by addressing Dreis & Krump Manufacturing Company, 2909-2923 South Halsted Street, Chicago, Illinois.

### ***Gives Cheap and Quick Method of Coloring Metals.***

Metals may be colored quickly and cheaply by forming on their surface a coating of a thin film of a sulphide.

In five minutes brass articles may be coated with any color varying from gold to copper red, then to carmine, dark red, and from light aniline blue to a blue white, like sulphide of lead, and at last a reddish white according to the thickness of the coat, which depends on the length of time the metal remains in the solution used.

The colors possess a very good lustre; and if the articles to be colored have been previously thoroughly cleansed by means of acid and alkalies, they adhere so firmly that they may be operated upon by the polishing steel.

To prepare the solution dissolve 1½ ounce of hyposulphite of soda in 1 pound of water, and add 1½ ounce of acetate of lead, dissolved in half a pound of water.

When this clear solution is heated to from 190° to 210° F., it decomposes slowly and precipitates sulphide of lead in brown flakes.

If metal be now present, a part of the sulphide of lead is deposited thereon, and according to the thickness of the deposited sulphide of lead, the above mentioned colors are produced.

To produce an even coloring, the articles must be evenly heated.

Iron treated with this solution takes a steel blue color; zinc a brown color; in the case of copper objects, the first gold color does not appear.

If, instead of the acetate of lead, an equal weight of sulphuric acid is added to the hyposulphite of soda, and the process carried on as before, the brass is covered with a very beautiful red, which is followed by a

green (which is not in the first mentioned scale of colors), and changes finally to a splendid brown with green and red iris glitter. This last is a very durable coating.

Very beautiful marble designs can be produced by using a lead solution, thickened with gum tragacanth, on brass which has been heated to 210 degrees Fahrenheit, and is afterward treated by the usual solution of sulphide of lead.

The solution may be used several times.

### ***Notes and Queries.***

#### **Gas Burners for Furnaces.**

From Lincoln Stove Repair Company, 205-215 South Tenth Street, Lincoln, Nebraska.

Can you please give me the names and addresses of manufacturers making burners for furnaces for natural gas?

Ans.—Standard Heating and Radiator Company, Pittsburgh, Pennsylvania; Haynes-Langenberg Manufacturing Company, St. Louis, Missouri; Union Gas Burner Company, 367-369 Ellicott Street, Buffalo, New York.

#### **Aluminum and Brass Sheets.**

From Ralph J. Karney, Rockport, Indiana.

I would like to know where I can buy aluminum and brass sheets.

Ans.—S. Birkenstein and Sons, 377 West Ontario Street; United Smelting and Aluminum Company, 53 West Jackson Boulevard; both of Chicago, Illinois; United States Reduction Company, East Chicago, Indiana; can furnish you with aluminum sheets. Detroit Copper and Brass Rolling Mills, 111 North Jefferson Street; Rome Brass and Copper Company, 117 North Market Street; Merchant and Evans Company, 327 North Sheldon Street; all of Chicago, Illinois, can supply you with brass sheets.

#### **Seamless Copper Tubing.**

From H. E. Fendring, 1238 East Third Street, Pomona, California.

Please tell me where I can buy 20, 22 and 24 gauge seamless copper tubing two inches outside diameter.

Ans.—Dallas Brass and Copper Company, 820 Orleans Street, Chicago, Illinois; M. A. Purvin and Company, 53 West Jackson Boulevard, Chicago, Illinois.

#### **Inkstands and Wells.**

From J. Oscar Smith, 537 Reed Street, Moberly, Missouri.

Kindly advise who makes self-closing inkstands and wells for office desk use. Also the names of manufacturers who make novelty articles from hard rubber.

Ans.—1. Sengbusch Self-Closing Inkstand Company, Stroh Building, Milwaukee, Wisconsin; Davis Emry, 298 Broadway, New York City; make self-closing inkstands and wells. 2. Davol Rubber Company, Providence, Rhode Island; Home Rubber Company, Trenton, New Jersey; American Hard Rubber Company, 9 Mercer Street, New York City; Chicago office, 111 West Washington Street, Chicago, Illinois; make novelty articles from hard rubber.

Don't stop buying War Savings Stamps until you have purchased all you can. Don't be a quitter—buy your quota.



# Illustrations of New Patents

**Watch This Page. Keep Yourself Informed Concerning Improved Devices Which May Save Labor in Your Shop or Add Another Source of Income to Your Retail Store.**

1,359,957. Child's Vehicle. Charles C. Bolen, Marion, and Clarence E. McKee, Columbus, Ohio. Filed Jan. 29, 1920.

1,359,965. Boring-Tool. Auguste E. Claudon, Denver, Colo. Filed April 12, 1918.

1,359,998. Flytrap. Franciszek Kulbaka, West Albany, N. Y. Filed May 7, 1920.

1,360,009. Washing-Machine. John Negrescou, Chicago, Ill. Filed Nov. 28, 1919.

1,360,016. Boring and Cutting Tool. George G. Porter, Syracuse, N. Y. Filed June 17, 1919.

1,360,060. Washing-Machine. Joseph Vierling, Pittsburgh, Pa., assignor to Pioneer Brush Washing Machine Company, Pittsburgh, Pa., a Corporation of Delaware. Filed May 24, 1917.

1,360,144. Clothesline. Frank Pete, McDonald, Pa. Filed June 5, 1920.

1,360,176. Wrench. James H. A. Carr, McKees Rocks, Pa. Filed June 23, 1920.

1,360,181. Heating Stove or Furnace. Frederick D. Cook, Blairsville, Pa. Filed Aug. 22, 1919.

1,360,227. Jar-Lifter. John L. Kivlan, Boston, Mass. Filed Jan. 15, 1920.

1,360,256. Can-Opener. Edwin Anderson, Seattle, Wash. Filed April 20, 1920.

1,360,284. Hinge Construction. Henry J. Gagnon, Cohoes, N. Y. Filed April 10, 1919.

1,360,289. Auxiliary Lock. Joseph F. Gunderson, Seattle, Wash. Filed Oct. 27, 1919.

1,360,309. Means for Removably Supporting Mop-Wringing Mechanisms. William A. Nadvornik, Detroit, Mich. Filed Sept. 5, 1919.

1,360,314. Stove-Casing. John Poris, Oshkosh, Wis. Filed Nov. 8, 1919.

1,360,321. Tool for Removing and Attaching Bottle-Caps. Max C. Rosenfeld, Boston, Mass. Filed Oct. 10, 1919.

1,360,328. Drill. John C. Stokes, Shreveport, La. Filed Dec. 20, 1919.

1,360,333. Washing-Machine. Max Tronic, Worcester, Mass. Filed May 14, 1919.

1,360,344. Nail. Edward Wood and Leon Ingraham, Indian River, Mich. Filed April 27, 1920.

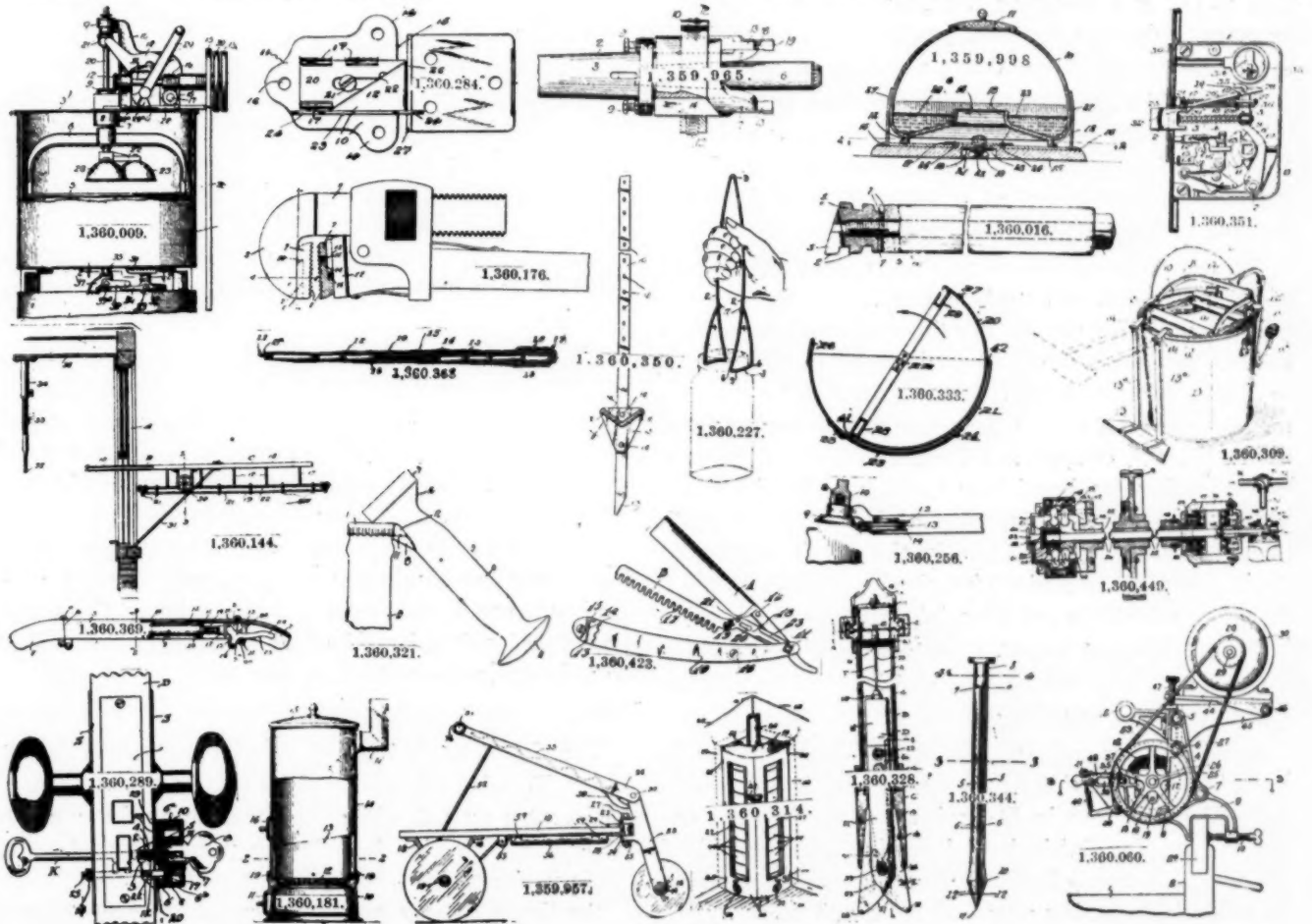
1,360,350. Anchor-Plate for Fenceposts. Brooke Anderson, Highland Park, Ill. Filed May 5, 1919.

1,360,351. Lock. Christopher Armat, Washington, D. C. Filed Aug. 8, 1919.

1,360,368. Screwdriver. George N. Coburn, Boston, Mass. Filed Oct. 7, 1918.

1,360,369. Auto-Bumper. Louis Cohen, Johnstown, N. Y. Filed Aug. 23, 1920.

1,360,423. Razor. Andrew McAnulty, Ottawa, Ontario, Canada. Filed Dec. 1, 1919.



# Weekly Report of the Markets

*General Conditions in the Steel Industry. Review of Prices and Tendencies in Sheet Metals, Pig Iron, etc.*

## UNFILLED TONNAGE WILL TAKE HALF A YEAR'S OUTPUT.

Unfilled orders on the books of the leading interest December 31 showed a decrease of 873,359 tons during the month of December and amounted to 8,148,122 tons, as against 9,021,481 tons November 30, and 11,118,468 tons July 31, the highest record established since January, 1919, when the orders amounted to 11,474,054 tons.

The corporation enters the new year with the smallest amount of bookings in over a year past.

New business amounted to between 700,000 and 800,000 tons, or somewhere near 50 per cent of capacity.

At this rate the leading interest will be enabled to maintain present operations of approximately 90 per cent of capacity for six or seven months to come.

The present unfilled tonnage is of substantial proportions and the total on the books is greater than any that was reported in 1919, with the exception of December.

It compares favorably with the small amount of business left to the independents, who as a whole are hardly averaging between 20 and 30 per cent operation, and report an incoming business of less than 25 per cent capacity.

It is not anticipated in the trade that any marked increase in demand for steel products will make itself felt for two or three months to come.

When will consumers enter the market unreservedly? When will reductions in wages become general? Will there be another dual market with prices of the independents below instead of above those of the leading interest?

These are the questions now engaging the attention of the entire iron and steel industry.

The process of eliminating the dual market came to an end last week when the reductions in pipe prices to the corporation level became general, after the announcement of a cut by the Jones and Loughlin Steel Company, the Youngstown Steel and Tube Company, the Wheeling Steel and Iron Company, the Steel and Tube Company of America and others generally throughout the North, while in the Birmingham district most of the sanitary pipe shops announced reductions from the \$100 and \$110 level to \$75.

The water and gas-pipe makers also have pretty generally adopted cuts to \$55 and \$60 for water pipe and to \$59 and \$64 for gas.

It will be remembered that the leading interest in the Pittsburgh section as well as a few in the North reduced prices late in December. Now that the entire market for finished steel products has stabilized itself at a common level, that of the leading interest, attention is becoming attracted more and more by the

possibilities of a dual market with the price of the independents below those of the corporation.

The steel ingot production of the country during December, of 30 companies, representing about 85 per cent of the country's total capacity, was 2,340,365 gross tons, according to the report of the American Iron and Steel Institute, just made public. The total output for the entire year, based upon the 30 companies' output of 34,432,252 tons, would be approximately 40,500,000 tons, as against 33,694,695 tons in 1919 and 43,051,022 tons in 1918. The December output was the smallest of any month during the year.

## Steel.

The first cut in prices since December 8, 1920, was announced by the leading finished steel jobbers and warehouse interests in and around New York last week in an endeavor to stimulate business.

The list now quotes blue annealed sheets at \$4.90, galvanized at \$7.35 and black at \$6, while hoops are quoted at \$4.65 and floor plates at \$5.75. Shapes, plates and bars are still quoted at \$3.80, \$4 and \$3.70, respectively.

There is little activity in this market at the present time. Export houses report a continued lethargy in most cases, but a few state that there is an increase in inquiry from abroad and some orders are being placed.

## Copper.

The larger producers of copper state that there is a continuation of heavy inquiries in the market and while some small business is being booked the large consumers have not broken into the market as yet, although they are expected to do so at any time.

Export sales have increased and there are reports of sales aggregating 10,000,000 pounds at 13 cents to English, French and German interests within the past few days.

There is also a report that prices have been advanced on account of the better feeling in the market, but the larger producers state that whereas they might ask a little higher price from certain buyers the price in the main is still 13 cents for January and February delivery and 13.25 for any later deliveries.

These interests also state that they are unable to locate any copper in the market under the 13 cent level and are almost certain that stocks of the metal at reduced prices have been liquidated and ceased to be a factor in the market, at any rate they hope so.

## Tin.

The London tin market experienced another advance Tuesday of this week amounting to over one-half cent a pound, while the domestic market was up slightly for Straits, but the 99 per cent grade was again unchanged.

Sterling exchange was up 8 cents. Consumers are



showing no interest at present and the market is purely a dealers' market.

It is believed some of the bids from dealers are to cover short sales, and, of course, the way sterling exchange has been advancing is most impressive.

How much of the advance in sterling has been caused by covering of shorts and how much is the result of a genuine improvement in the international situation of exchange remains to be proved.

### **Lead.**

Buyers were bidding 4.90 on the New York exchange for spot, January and February delivery in New York early in the week but there were no offers at any price and 5 cents was taken as the market.

St. Louis deliveries in the outside market are held at 4.90. The leading interest continues to quote 4.75 for both New York and St. Louis.

Joplin advices state that the largest producing mines are closed and that production is at a minimum.

Some ore is being settled for that was purchased last year, the \$50 at \$55 basis, but a few purchases this week were made on a \$47.50 basis.

Chicago prices for American pig lead advanced from \$5.25 to \$5.35 per hundred pounds and bar lead from \$6.00 to \$6.10 per hundred pounds.

### **Solder.**

Solder prices have increased in the Chicago market \$1.50 per hundred pounds. Quotations now in effect are as follows: Warranted, 50-50, per hundred pounds, \$25.00; Commercial 45-55, per hundred pounds, \$23.00; and Plumbers', per hundred pounds, \$21.00.

### **Zinc.**

There is only a moderate amount of buying of zinc and that only for prompt shipment. The sheet mills generally are not heard from at present, being to a good extent shut down or running at a small scale. Producers have been meeting the market for prompt and January, but as disinclined as ever to offer forward shipments.

A slight advance has occurred in the Chicago price of zinc in slabs, namely, \$6.05 to \$6.10 per hundred pounds.

### **Sheets.**

In general, some of the independent sheet makers are making a canvass for business and presumably inducements are offered in some cases, but the inducements are evidently small.

The volume of bookings is certainly very small. Consumers are in no mood to take hold at this time, and as a matter of fact they are, as a whole, receiving fairly heavy shipments. It must be remembered that while the leading interest represents only something like 40 per cent of the capacity of the entire sheet industry, it numbers among its customers buyers who altogether take much more than 40 per cent of the total, as there are many buyers who are customers of the leading interest but in time of heavy demand buy also from independents.

The leading interest has been making very heavy shipments, and besides this there are shipments from independents of a considerable tonnage.

### **Tin Plate.**

The leading interest has a regular program of scheduling 80 per cent of its tin mills for operation, and last week came within a couple per cent of operating the full quota desired.

A good volume of specifications is in hand, but chiefly against contracts made for the second half of last year, there being more than two months of business carried over.

This interest has booked one very large tin plate contract for the half year, and some smaller ones, but in general the contracting is rather slow, and the company is making no effort to induce customers to contract just at this time.

The independent tin plate producers are making no effort to close contracts, preferring to leave buyers take their own time.

In this respect the tin plate market is somewhat different from the sheet market, for in the latter trade some of the independents are very actively soliciting business.

### **Old Metals.**

Wholesale quotations in the Chicago district which should be considered as nominal are as follows: Old steel axles, \$17.00 to \$18.00; old iron axles, \$30.00 to \$32.00; steel springs, \$16.00 to \$17.00; No. 1 wrought iron, \$13.50 to \$14.00; No. 1 cast, \$17.00 to \$17.50; all per net tons. Prices for non-ferrous metals are quoted as follows, per pound: Light copper, 8 cents; light brass, 5 cents; lead, 3 cents; zinc, 3 cents; cast aluminum, 9 cents.

### **Pig Iron.**

The pig iron industry does not show much sign of speeding up. Rather than make and pile iron with no one willing to take it, furnaces for the most part have ceased making it and melters of iron are fast doing likewise.

They are not turning out finished products faster than the trade will take them.

As a consequence production is at a minimum. Buyers both of raw and finished material are fearful of present prices and are taking no chances.

Sales are limited to spot shipment and cover current needs. Resale iron continues a real and burdensome factor in the pig iron market.

The Rogers, Brown and Company, market report says that while 1921 has scarcely had a chance to demonstrate whether or not it will live up to all of the good things which have been predicted for it, the second week of the New Year has certainly show a marked improvement in general optimism. Sales have been larger than for several weeks past.

Re sale iron is diminishing. The next step in liquidation is at hand. Several furnaces, which are not classed as factors in the merchant production, have found that they have a small stock on the yards which they will not need for themselves and are offering this on the market, in some instances at prices below those being maintained by strictly merchant furnaces.

For the most part, orders have been placed for early delivery. Furnacemen are very much concerned as to their ability to produce iron at the present market and are exerting their efforts to find ways of reducing costs.

# Current Hardware and Metal Prices.

AMERICAN ARTISAN AND HARDWARE RECORD is the only publication containing Western Hardware and Metal prices corrected weekly.

The prices and discounts quoted on this and the following pages, are, for the most part, subject to change without notice. Owing to the unsettled conditions of the markets and the shortage of materials it is practically impossible for any manufacturer to guarantee his prices for any given length of time.

METALS	HARDWARE	Scratch.	BEVELS, TEE.
<b>FIG IRON.</b>	<b>ADZES.</b>	No. 18, socket Handled .....per doz. 2 50	Stanley's Rosewood handle, new list .....Nets
Northern Fdy. No. 2.....\$33.70	Carpenters'.	No. 344 Goodell- Pratt, list less.....35-40%	Stanley iron handle.....Nets
Southern Fdy. No. 2.....40.67	Plumbs .....Per doz. \$29.00	No. 7 Stanley....." 2 25	<b>BINDING CLOTH.</b>
Lake Sup. Charcoal.....33 70	<b>Coopers'.</b>	<b>AXES.</b>	Zinced .....55%
Malleable .....48.50	Barton's .....Net	First Quality, Single Bitted, 3 to 4 lb., per doz. 16 50	Brass .....40%
<b>FIRST QUALITY BRIGHT TIN PLATES</b>	White's .....Net	First Quality, Double Bitted .....per doz. 22 50	Brass, plated .....60%
Per Box	<b>Railroad.</b>	<b>Broad.</b>	<b>Auger.</b>
IC 14x20...112 sheets \$13 10	Plumbs .....Per doz. 30.00	Plumbs. Can. Pat., 6-lb. 65 00	Jennings Pattern .....Net
IX 14x20.....15 15	<b>AMMUNITION.</b>	<b>Single Bitted (without handles).</b>	Ford Car.....List plus 5%
IXX 14x20.....16 40	<b>Shells, Loaded, Peters.</b>	Plumbs, 4 1/4-lb. ....19 50	Ford's Ship....." 5%
IXXX 14x20.....17 70	Loaded with Black Powder, 18%	<b>Double Bitted (without handles).</b>	Irwin .....35%
IXXXX 14x20.....19 00	Loaded with Smokeless Powder .....18%	Plumbs, 4 1/4-lb. ....23 50	Russell Jennings.....plus 20%
IC 20x28.....26 20	Winchester.	<b>BAGS, PAPER, NAIL.</b>	Clark's Expansive.....33 1/4%
IX 20x28.....30 30	Smokeless Repeater Grade, 15%	Pounds ... 10 16 20 25	Steer's "Small list, \$22 00..5%
XX 20x28.....32 80	Smokeless Leader Grade...15%	Per 1,000..\$5 00 6 50 7 50 9 00	" "Large " \$26 00..5%
IXXX 20x28.....35 40	Black Powder .....15%	<b>BALANCES, SPRING.</b>	Irwin Car.....35%
IXXXX 20x28.....38 00	U. M. C.	Sight Spring.....Net	Ford's Ship Auger pattern Car .....List plus 5%
<b>COKE PLATES</b>	Nitro Club.....18%	Straight .....Net	Center .....10%
Cokes, 180 lbs.... 20x28 \$17 80	Arrow .....18%	<b>BARS, WRECKING</b>	<b>Countersink.</b>
Cokes, 200 lbs.... 20x28 18 00	New Club.....18%	V. & B. No. 12.....\$0.45	No. 18 Wheeler's...per doz. \$2 25
Cokes, 214 lbs....IC 20x28 18 30	<b>Gun Wads—per 1000.</b>	V. & B. No. 24.....0.75	No. 20 " " " 3 00
Cokes, 270 lbs....IX 20x28 20 30	Winchester 7-8 gauge 10&7 1/2%	V. & B. No. 324.....0.80	American Snailhead " 1 75
<b>BLUE ANNEALED SHEETS.</b>	" 9-10 gauge 10&7 1/2%	V. & B. No. 30.....0.85	" Rose...." 2 00
Base .....per 100 lbs \$4 68	" 11-28 gauge 10&7 1/2%	V. & B. No. 330.....0.90	" Flat...." 1 40
<b>ONE PASS COLD ROLLED BLACK.</b>	<b>Powder.</b>	<b>BASKETS.</b>	Mahew's Flat...." 1 60
No 18-20.....per 100 lbs \$5 80	Each	Clothes.	" Snail...." 1 90
No. 22-24.....per 100 lbs. 5 85	DuPont's Sporting, kegs..\$11 25	Small Willow....per doz. 15 00	<b>Dowel.</b>
No. 26.....per 100 lbs. 5 90	" " 1/4 kegs 3 10	Medium Willow.. " 17 00	Russel Jennings.....plus 20%
No. 27.....per 100 lbs. 5 95	DuPont's Canisters, 1-lb.. 56	Large Willow...." 20 00	<b>Gimlet.</b>
No. 28.....per 100 lbs 6 00	" " kegs.. 22 00	<b>Galvanized.</b> 1 bu. 1 1/2 bu.	Standard Double Cut Gross \$3 40
No. 29.....per 100 lbs. 6 10	Hercules "E.C.", kegs.....22 50	Per doz.....\$16 03 \$18 72	Nail Metal Single Cut .....Gross \$4 00—\$5 00
<b>GALVANIZED.</b>	Hercules "Infallible", 25-can drums .....22 00	<b>BEATERS.</b>	<b>Reamer.</b>
No. 16.....per 100 lbs. \$6 60	Hercules "Infallible", 10 can drums .....9 00	Carpet. Per doz.	Standard Square.....Dox. 2 50
No. 18-20.....per 100 lbs. 6 75	Hercules "E.C." and "Infal- lible", canisters .....1 00	No. 7 Tinned Spring Wire..\$1 10	American Octagon... " 2 50
No. 22-24.....per 100 lbs. 6 90	Hercules W. A. 30 Cal. Rifle, canisters .....1 25	No. 8 Spring Wire Cop- pered .....1 50	<b>Screw Driver.</b>
No. 26.....per 100 lbs. 7 05	Hercules Sharpshooter Rifle, canisters .....1 25	No. 9 Preston.....1 75	No. 1 Common.....40
No. 27.....per 100 lbs. 7 20	Hercules Bullseye Revolver, canisters .....1 00	<b>Egg.</b> Per doz.	No. 26 Stanley.....75
No. 28.....per 100 lbs. 7 35	<b>ANVILS</b>	No. 50 Imp. Doyer.....\$1 10	<b>BLADES, SAW.</b>
No. 30.....per 100 lbs. 7 85	Solid Wrought...23 & 23 1/2 per lb.	No. 102 " " Tinned 1 35	Wood.
<b>BAR SOLDER</b>	<b>ASBESTOS.</b>	No. 150 " " hotel 2 10	Disston 30-in.
Warranted,	Paper up to 1/16.....10c per lb.	No. 10 Heavy hotel tinned 2 10	Noa. ....6 66 26
50-50.....per 100 lbs. \$25.00	Millboard 3/32 to 1/4..10 1/2c per lb.	No. 13 " " " 3 30	\$9 45 \$10 05 \$9 45
Commercial,	Corrugated Paper, (250 sq. ft.).....\$6.50 per 100 lbs.	No. 15 " " " 3 60	<b>BLOCKS.</b>
45-55.....per 100 lbs. 23.00	Rollboard .....11c per lb.	No. 18 " " " 4 50	Wooden .....20%
Plumbers'.....per 100 lbs. 21.00	<b>AUGERS.</b>	<b>Hand.</b>	Patent .....20%
<b>ZINC.</b>	Boring Machine .....40 @ 40&10%	Per doz.\$11 50 13 00 14 75 18 00	<b>BOARDS.</b>
In slabs .....\$6.10	Carpenter's Nut.....50%	<b>Moulders'.</b>	Stove. Per doz.
<b>SHEET ZINC.</b>	Hollow.	12-inch .....Per doz. 20 00	24x24 .....13 65
Cask lots .....13c	Bonney's .....per doz. 30 00	<b>BELLS.</b>	26x26 .....16 05
Less than cask lots....13 1/4-13 1/2c	<b>Post Hole.</b>	Call.	28x28 .....18 85
<b>COPPER.</b>	Iwan's Post Hole and Well...30%	3-inch Nickered Rotary Bell, Bronzed base....per doz. \$5 50	28x30 .....21 30
Copper Sheet, mill base.....21 1/2c	Vaughan's, 4 to 9 in. .....per doz. \$14.00	Cow.	33x33 .....25 50
<b>LEAD.</b>	Ship.	Kentucky .....30%	36x36 .....30 50
American Pig .....\$5.35	Ford's .....Net	<b>Door.</b> Per doz.	<b>Wash.</b>
Bar .....6.10	<b>AWLS.</b>	New Departure Automatic \$7 50	No. 760, Banner Globe, (single) .....per doz. \$5 25
<b>TIN.</b>	Brad.	Rotary.	No. 652, Banner Globe, (single) .....per doz. 6 75
Pig tin .....42 1/2c	No. 3 Handled....per doz. \$0.65	3 -in. Old Copper Bell... 6 00	No. 801, Brass King per doz. 8 25
Bar tin .....44 1/2c	No. 1050 Handled " 1 40	3 -in. Old Copper Bell, fancy .....8 00	No. 860, Single—Plain Pump .....6 25
	Patent ast'd, 1 to 4 " 85	3 -in. Nickered Steel Bell 6 00	<b>BOLTS.</b>
	<b>Harness.</b>	3 1/2-in. Nickered Steel Bell 6 50	Carriage, cut thread, 3/4x6 and sizes smaller and shorter .....30-10%
	Common .....1 05	<b>Hand.</b>	Carriage, sizes larger and longer than 3/4x6...20-10-5%
	Patent .....1 00	Hand Bell polished List plus 15%	Machine, 3/4x4 and sizes smaller and shorter...40-5%
	<b>Peg.</b>	White Metal.....15%	Machine, sizes larger and longer than 3/4x4...30-5%
	Shouldered .....1 60	Nickel Plated.....5%	Stove .....60-10%
	Patented .....75	Swiss .....10%	Tire .....40-5%
		<b>Miscellaneous.</b>	<b>Vortise, Door.</b>
		Church and School, steel alloys .....30%	Gem, Iron.....5%
		Farm, lbs...40 50 75 100	Gem, bronze plated.....5%
		Each ....\$3 00 3 75 5 50 7 25	